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ABSTRACT

Intended for those responsible for all kinds of publications in developing countries, this booklet has three main objectives: (1) to give the ordinary person who knows nothing about printing or printing processes enough information to be able to deal intelligently with a printer, (2) to show how it is possible for a person or group of persons with no previous experience to set up their own printing operation, and (3) to demonstrate how modest publications from leaflets to small booklets and even rural newspapers serving particular groups of people can be produced. Various sections of the booklet deal with relief block, rubber printing, letterpress, linotype, offset litho, stencil duplicating, dealing with the printer, starting one's own publication, getting quotations, preparing the manuscript, proofreading, and pagination. (HOD)

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ED257056

communication manual

THE LAYMAN PRINTER

Frank Barton Gunter Lehrke

U.S. DEPARTMENT OF EDUCATION
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Foreword

The idea for this book originated simultaneously in Brighton and Bonn. While Frank Barton was thinking of placing something printed on printing in the hands of a large number of friends in Africa, Asia and the Caribbean, I had already started writing a practice-oriented manual for my colleagues working as consultants and instructors in the countries of the southern hemisphere in fields as varied as politics, economy, science, trade unions and mass communication. They are quite often helpless when they intend supplementing their work with publications printed by themselves.

Frank Barton had already written for the Friedrich-Ebert-Stiftung "The Newsroom" as a guide for new entrants to journalism. Frank and I had tackled the technical difficulties related to production of the book in cooperation with a German printer and we believed this was a useful contribution for young journalists. It was not surprising, therefore, that we exchanged views on this project. We agreed to combine our respective notions into a new book and we hope to have succeeded in doing so.

The printing industry is so comprehensive and complicated that it cannot be dealt with fully in such a handbook. However, we hope to have achieved at least this: anyone who reads this book thoroughly will not remain a complete stranger to print and printers. He will at least be in a better position to recognise his own possibilities and limitations. Above all, he will know which questions to ask.

Those interested in printing should visit a printing-works and a bookbinder. Better go into an printers where type is set and composed into columns and pages by hand and where they have a Linotype machine. Having read this book and visited a printer, you will have the feeling having gained some insight into this kind of "Black Art". It can be fascinating.

Frank Barton has put together the knowledge gathered as a well-known instructor and consultant in many countries of the Third World. I have combined my experiences as a former journalist also in-charge of

layout and presently responsible for all kinds of publications as part of my assignment in the Communication Department of the Friedrich-Ebert-Stiftung.

Frank obviously wrote his manuscript in English; mine had to be transled from German and adapted to suit the requirements of the English-speaking reader. My thanks to the translator – and to Frank Barton who, as a "final editor", has given finishing touches and helped remove possible misconceptions.

We would like our readers to write to us if they think that some parts of this book should have been explained better and others enlarged. We will then try to comply with such wishes in the second edition.

G. L.

I. Introduction

You are now reading something that has been printed. These words were set letter by letter by a compositer and then the pages put together by another person. In the production of this book many skills were used. Even the paper had to be cut a special size and when the book was completed it had to be trimmed so that it looked clean and smart. A man – or possibly a woman – with other skills made sure the pages were in the right order before they were bound together.

Probably as many as half a dozen different skills were used to produce what you are now holding in your hand and these skills have been handed down over more than five centuries with processes slowly changing and adapting to the new times. And these processes are still going on – now, faster than ever. Indeed, there have been more changes in the printing industry in the last ten years than there were in the previous 100 years.

This book has three main objects:

(1) to give the ordinary person who knows nothing about printing or printing processes enough information to be able to deal intelligently with the printer when he wants something printed,

(2) to show how it is possible for a person or group of persons with no previous experience to set up their own little printing works and

(3) demonstrate how modest little publications, from leaflets to small booklets and even rural newspapers serving particular groups of people, can be produced.

If you are living in a developing country then the mere fact that you are holding a book in your hands at this moment is clearly remarkable. Not many people in many developing countries ever do! It is not a perfect guide, but it is certainly a good one that the stage of development of a country can be judged by the degree of literacy of its people.

The poorer half of the world – virtually the whole of the southern himisphere – has very low development and very low literacy. The rich northern half of the world has high development and high literacy.

In the rich nations of the world – whether they are capitalist or communist – virtually everybody can read and write. The lowest degree of literacy in any developed country is 98 per cent – in Ireland, Poland and Italy. In every other country of the rich world the figure is either 99 per cent or 100 per cent.

Many countries in the developing world have literacy rates far below 50 per cent and in some cases less than 10 per cent. There are many reasons for this disparity between rich nations and the developing nations (by the way, 'developing' is really just the polite term for 'poor') and they are very similar to the reasons why people in the rich half of the world have more of everything else than people in the poor half of the world. We need not go into that here but certainly one of the reasons why literacy is so low in the developing nations is because there is much less printed matter for people to read.

You may live in a town or city of your developing country and you will have a good deal of printed matter all round you. There are advertisements on walls in the streets; there is a newspaper which you can buy without walking too far; there are probably even a few magazines on sale and there is likely to be a library or reading room where you can look up things in books. But you will know very well that just a mile or two away from the city or town, where most of your countrymen live, there are very few, if any, of these things.

Hundreds or millions of people in scores of developing countries go through life hardly ever exposed to anything that is printed. One of the most alarming features of life in many developing countries is the fact that young men and women, leaving school having learnt to read and write, are then obliged to follow the lifestyle of their parents who are peasants and often live at a subsistence level for whom the printed word is as rare as a really good nutritious meal. And so, in a very few years, these young men and women, who were once literate, begin to forget

their literacy, begin to forget how to read for the simple reason that there is nothing to read.

Anything that can bring words printed on paper to these people is a real contribution to national development.

II. Unravelling the Mystery

The first thing anybody interested in printing should understand is that there is really no mystery about it. Although it can be a very sophisticated process, such as the production of high quality colour printing, it can also be a very simple process which anyone with common sense can follow and with a minimum of expense actually begin to print simple things like notices or slightly bigger things like news-sheets.

Let us start with the most basic form of printing, called **Relief Block**. This system is only useful for fairly big letters of at least an inch high such as you would use in a poster or the heading of a notice. With care and a very sharp knife with a good point anyone can make one of these Relief Blocks. Potatoes or yams or any other vegetable with a similar texture are ideal material. Cut whatever you are using in half so that you have a clean flat surface to begin with and then draw gently with a pencil the shape of the letter or design you finally want to print. With your knife you then cut away those parts that you don't want printed, thus leaving the raised letter as illustrated in the drawing. Ink is spread on the raised letter by a roller or if you have not got a roller a pad will do. It is important to get an even amount of ink on the raised section and make sure nothing goes on any part of the block.

You will need to experiment quite a bit before you get exactly the right effect, but like everything else that is new, it should not take you long to get a good impression. Besides certain vegetables, soft wood, lino and some plastics are good for making Relief Blocks.

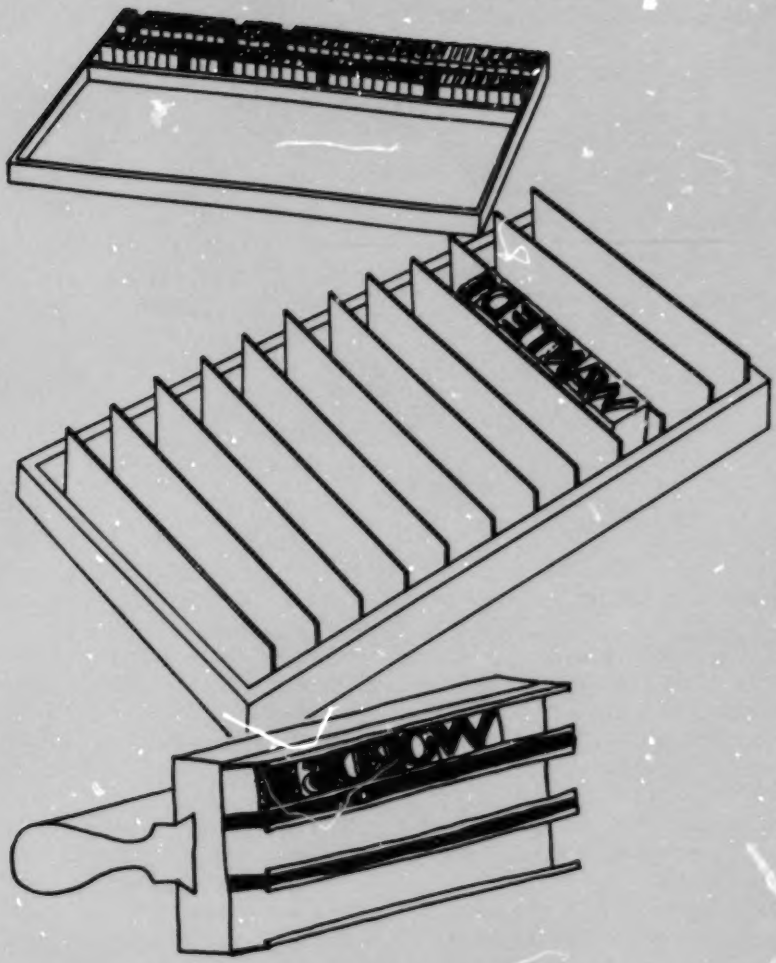
Let us suppose you are the secretary of a farmers' group in a rural area which comes together from time to time to discuss problems. It might be very useful to be able to produce notices to pin up and these Relief Blocks are ideal for the headings. You could cut out a good selection of letters and they can be used over and over again. After use they

A Relief Block

should be carefully cleaned with spirit or petrol. This type of Relief Block printing is ideal for up to about 50 or 70 notices. In addition, of course, you can use different coloured inks and some people even go so far as to use one letter in black, the next in red then in black again and so on for the headings on posters. Once you start experimenting and become experienced with these handmade Relief Blocks you will be surprised how effective they can be.

In some towns in the developing world you may be able to find small **rubber printing sets**. These are boxes of rubber-made letters just like the letters you may have cut from potatoes, but very much smaller.

You will only need one letter of the alphabet for the big letters (and probably not even every letter of the alphabet) because if you have to use, for example, more than one 'A', then you simply stamp it wherever it is needed, with these small rubber letters there are several of each because these are letters you have to fit together to make the words of the message you want on your notice. The letters slide into a holder as shown in the illustration.



Rubber letters in different holders

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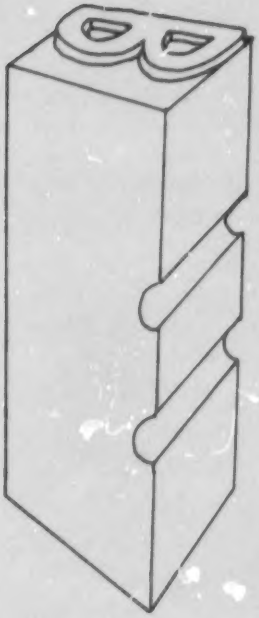
If you can get one of these rubber sets then they are very useful for fairly basic printing purposes. But if you cannot get a rubber set of letters and all you are producing is one notice from time to time, then it is a good second best for the bigger letters to be cut as described and used for the heading of the notice, while you simply print by hand the rest of the notice underneath. As you get better at cutting your Relief Blocks you will be able to make different sizes of letters. This is really how printing began hundreds of years ago, so you are following in a fine tradition!

Letterpress

If Relief Block printing (and then properly made rubber letters which slide into a holder) are the first steps on the print ladder, then the next is traditional **Letterpress**. Until very recently, when the electronic age began to change things, this was the most common form of printing and it is still widely used even in the most advanced places. Letterpress consists of separate letters (just like the rubber ones) but made of metal. They are called **'type'**. If you go into a printers which still uses Letterpress (and most printers in the developing countries do) you will see that there are trays of different sizes of Letterpress type and the compositor selects the letters he needs to set up the words which are to be printed.

At one time even newspapers were **hand-set** like this, one letter at a time, and there are still a few newspapers which use this method. The letters are on a metal base which makes them what is called in the trade **'type-high'**. The spaces between the words are a little lower than the letters so that they will not mark the paper when printing begins. Letterpress printing is generally used these days for things like notices, wedding invitations and the smaller jobs.



A Letterpress letter example

It is quite a skilful business arranging the letters into words and fitting the spaces between the words so that not only the left-hand margin of the page or column is straight, but also the right-hand margin, too, like this book has been set. But this skill can be learned with plenty of practice.

After all the type has been assembled into the page or other shape that is required, it is 'locked up' as they say, which means that it is all firmly bolted together inside a metal frame. This frame is then inked with a roller, the paper placed upon it and then pulled beneath a special fixed roller which presses the paper firmly, but not too heavily, so that only the ink on the raised letters comes off on the paper.

First of all this is done on what is called a **proofing press**. This is a special hand-operated press which printers use to produce just one copy of the printed matter which may then be checked for mistakes before proper printing begins.

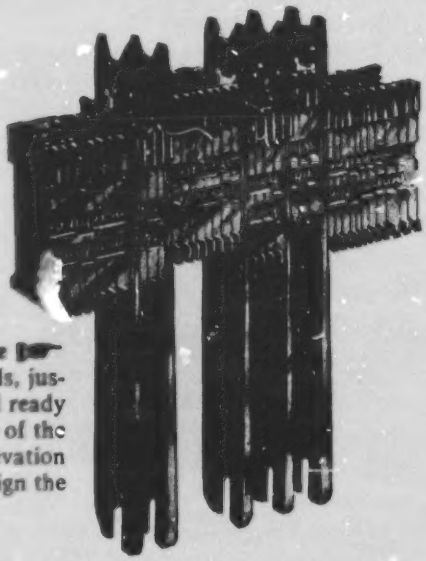
When everything is correct the metal frame holding the type (which is called a **'forme'**) is fitted into the printing press and printing begins. With this method many thousands of copies can be made.

But for small groups of people who do not want anything so expensive or so professional as this, but who still require something rather better than Relief Block or rubber-stamp printing, it is well worth investigating the possibility of getting a selection of **metal type** of various sizes from about the size of the letters of this book up to letters two or three times as big. With such a selection of type and one or two different sized formes or frames into which the type will be fitted when it is set, plus a hand-operated printing press, you really have a very efficient little **printshop**.

As the new electronic printing becomes more and more generally used in the developing world a lot of old **Letterpress equipment** is easy to find on the secondhand market and often very inexpensive. If this type of printing equipment appeals to you then it would make good sense to have a talk with a printer who can show you exactly how things work and you can decide whether you think that with practice and patience it would be possible to successfully operate such a press.

The next step up the print ladder and a step which you certainly will not want to take – are the machines which set Letterpress automatically. There are three main machines still commonly used and they have hardly changed in design in a hundred years. They are called **Linotype, Intertype** and **Monotype**. Linotypes produce exactly what they are called – a **line of type**. The operator sets the width of the column that is required in very much the same way as a typist sets the margin and then taps out letter by letter what has to be set. When he gets to the end of the line there is generally either some space left over which is not big enough to fit another word into, or else the last word on the line is too long and has to be broken so that a part of it goes on to the next line. A skilled Linotype

operator can very quickly tap out the spaces and fit them in between the words he has already set so that the line fits exactly the margin he wants. Often, if he has a very long word at the end of the line, he will have to break this word with a hyphen. If you look at the columns of a newspaper which generally has columns about two inches wide you will see that quite a lot of lines have hyphenated words at the end of a line, going from one line to the next.



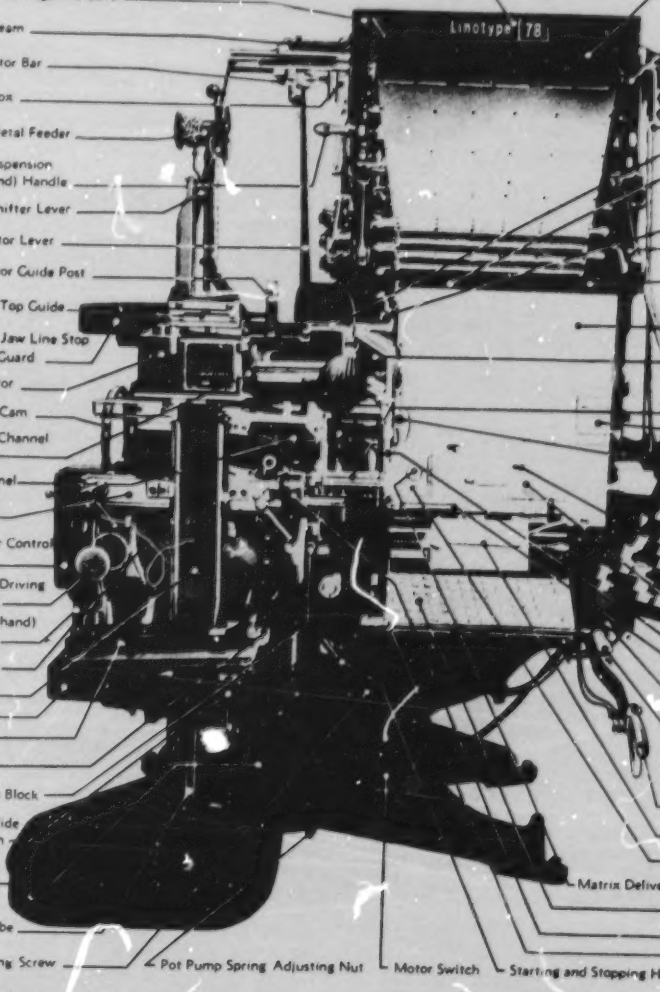
An assembled line ☛ of matrices and spacebands, justified (i.e. spaced out), and ready for casting. Note that two of the words are at a higher elevation than the others, so as to align the italic dies with the roman.

Once the Linotype operator has set his line of type to fit he then pulls a lever and it is moulded into a solid **block of lead** – a line of type. It is obviously much easier for the printer who is making up the page to handle this solid line of type than thousands of separate letters. Intertype is a machine similar to the Linotype.

This is a composite line of type, set and cast on the Linotype. It is commonly referred to as a slug. The width and length of such slugs vary in accordance with the needs of the printer.

Monotype machines do exactly the same thing as Linotype machines except they do not mould the line into a solid mass. The letters are tapped out in the same way and spaced in the same way before moulding into lead. It just means that the other printers handling the finished stories have to be extra careful!

FRONT VIEW OF MODEL 78 LINOTYPE



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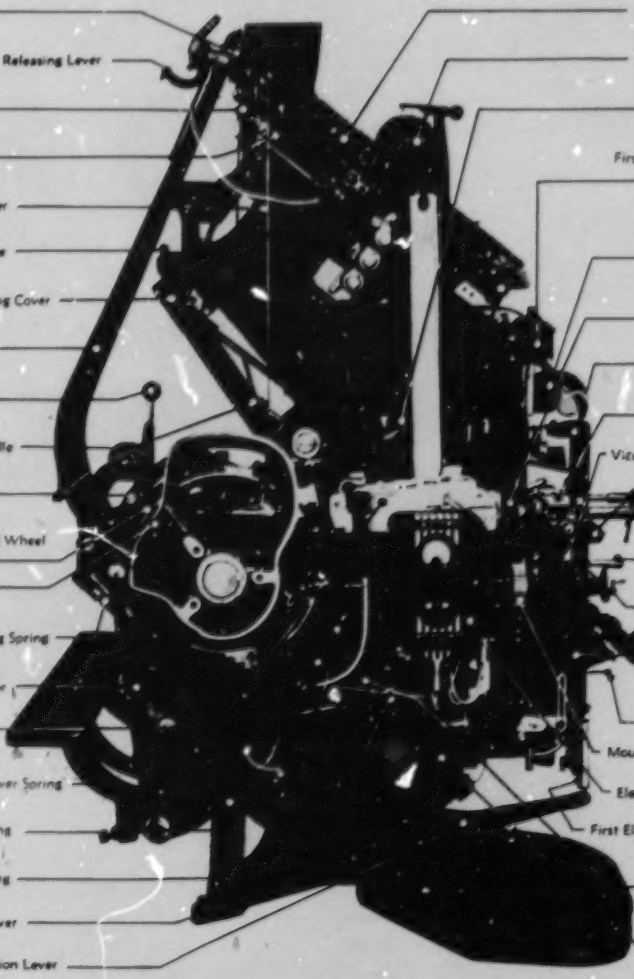
POT-SIDE VIEW OF MODEL 78 LINOTYPE



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Offset Litho

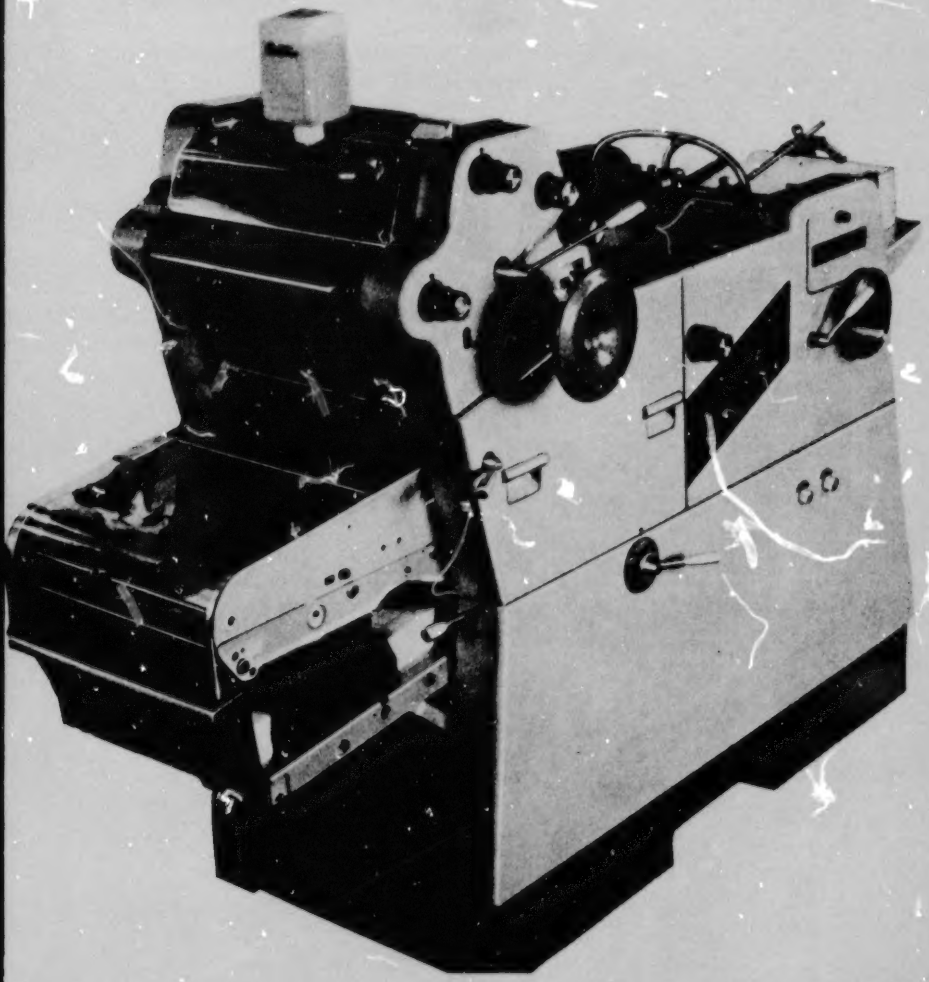
The biggest development in printing in the last 20 years has been the **offset litho machine**. They are now used for some of the smallest printing jobs where only a few hundred copies are needed of a single sheet, right up to major books with hundreds of pages. More and more newspapers have discarded the old Letterpress techniques for offset litho. From the customers' point of view, it gives high quality photographs and other illustrations without the cost of making the metal blocks which are used in the Letterpress techniques and for reasons which we will now explain it is very easy to have reprints of something you may have had printed a year ago without all the business of resetting the type and making up the formes.

The basic idea of offset litho printing is printing from thin sheets of specially prepared metal, plastic or even paper. There is none of the rather cumbersome business of formes of type which is used in Letterpress, though, as we shall see, it is possible to combine Letterpress with offset litho printing. It is certainly not a process for beginners, for not only are there considerable skills needed but it is also much more expensive to buy the equipment.

The basic principle of offset litho printing is that both the words and the pictures that have to be printed are put together and then photographed. The negatives are then developed on to the **metal plate**. The metal plate is then specially treated so that the words and pictures attract the ink while the rest of the plate does not.

You can use a paper or plastic plate and work directly on to them by drawing or typing or using a felt tipped pen. If you use Linotype, Monotype or Intertype (or any other form of metal type) then you merely take a good quality proof, photograph it and develop the image on to the metal plate. When whatever has to be printed has been put on the plate it is **'fixed'**, rather like a photographer 'fixes' his print in the dark-room and then it is ready for the machine. The plates are flexible and fit round the rollers. **Paper plates** are good for jobs that require about a thousand copies but for longer runs you need metal plates. After the job is fin-

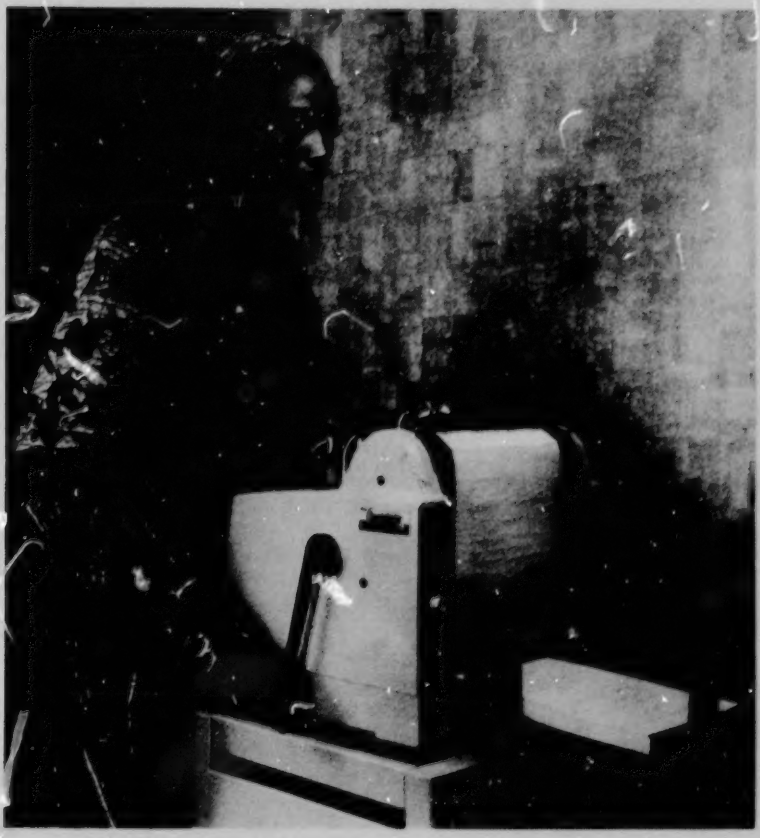
ished the plate can be stored and taken out again any time a repeat job is needed.



An offset duplicator

Stencil duplicating

For many print requirements where the cost is the main consideration a **stencil duplicator** or **silk screen** printer is the answer. Let us look at stencil duplicators first. There are both **flat-bed duplicators** and **rotary duplicators**. The flat-bed duplicator is still made but difficult to find



A duplicating machine

these days and they do virtually the same job as the silk screen press described in the next section.

Hand-operated rotary duplicators are reasonably priced and are ideal for producing everything from single sheet leaflets to little newspapers with perhaps as many as eight pages. Almost anybody with common sense can learn to operate and maintain a duplicator after a few hours instruction which the suppliers will always provide. Most duplicators print size A 4 and there is at least one on the market which prints a double A 4. All makers of duplicators also market machines that are electrically driven.

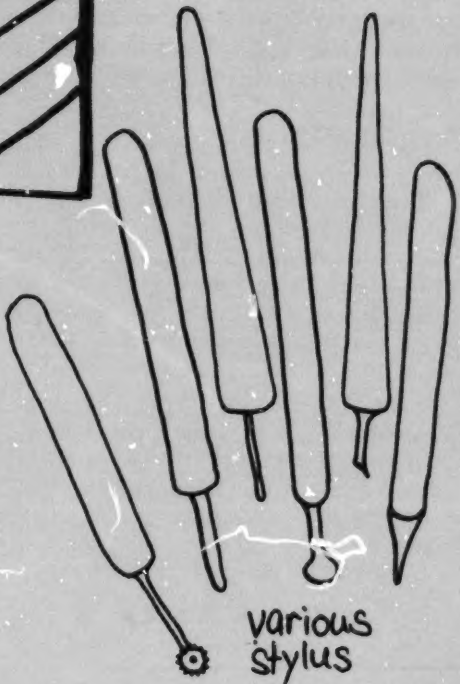
The quality of the finished job depends to a very great extent on how well the **stencil** has been prepared. The stencil is a wax covered fabric and the principle is that you cut through the wax to the fabric and the ink from the roller on the duplicator is thus forced through the fabric on to the paper as you turn the handle of the machine.

The simplest way of producing a stencil is to type it, but with the typing ribbon removed so that the keys of the typewriter which must be well cleaned first, cut through the wax. If you want larger letters than you can cut on the typewriter then you can buy different sized **plastic cards** which have all the letters of the alphabet in both capital letters and small letters cut out, and using something called a **stylus** you trace the letters you want in the big type, moving the plastic card from letter to letter until you have completed the words.

If you can draw well you can fairly easily learn to draw with a stylus on a **wax stencil** and get quite a good effect. If you make a mistake either with typing, putting in the bigger letters for the headings or anything else you may have put on the stencil, you can repair the damage with some correcting fluid. Stencil duplicating is good for up to as many as 2000 copies.

Now a word about the **stylus** – the name of the instrument you use to cut a stencil when you write or draw with it. There are various types from very fine points to quite broad ones, depending on the effect you want. There are also some special ones to give effects like dotted lines.

headlines can be made with the stylus using a plastic guide
ABC


various stylus

The one that gives a dotted line is like a stencil with a small roller on the bottom about half an inch in diameter with tiny knobs on the edge. Thus, as you pull this along the little knobs go through the wax stencel and the printed effect is to leave a dotted line. If you are near a big town try and find a good office equipment shop and see what is available both in the way of stencils and stylus. But it is perfectly possible to produce quite acceptable work with an old ballpen which will cut a stencil quite well. Like a lot of other things it is a question of trial and error until you get things right.

Working with stylus

One very offective type of **basic printer** has been developed by two Tanzanians in the Educational Media and Technology Department of the University of Dar es Salaam. This is how they have done it:

You will need the following materials:

1) a smooth, solid piece of wood for the base,

2) some other wood for the frame,

3) four screw nails, plus at least four half-inch nails and some smaller nails to join the frame together,

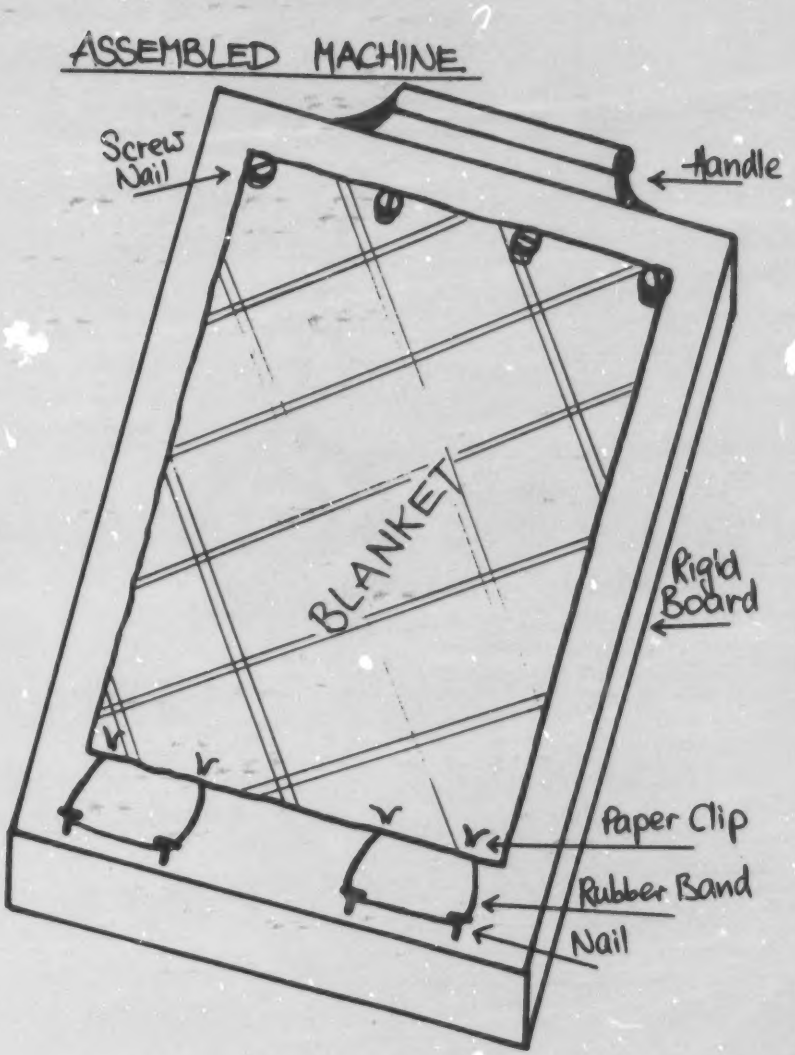
4) a piece of old blanket, or better still, felt; this should be as tightly woven as possible,

5) four strong rubber bands,

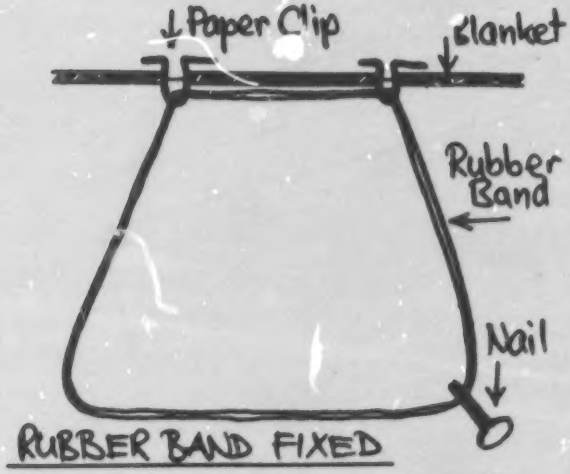
6) four paper clips.

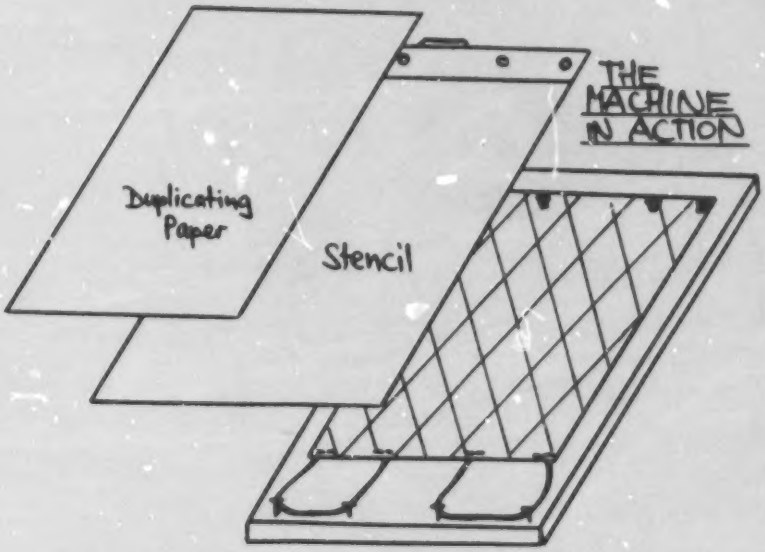
This is how it is built: there are three main parts to the machine and these are made separately and then joined together. These three parts are (1) the rigid base board (2) the roller (3) the blanket or felt.

First, the base board. For a normal stencil this should be cut to about 50 cm by 25 cm and between $1^1/_2$ and 2 cm thick. But it is best to first see exactly what size stencils are available and then build your duplicator accordingly. One side should be planed until it is perfectly smooth. At one end of the base screw in the four round-headed screw nails so that they will be in exact line with the holes at the end of a stencil. They should project about three quarters of a cm so that the stencil can be slipped over them. Put four small nails at the other end of the base board so that they are in line with the screw at the other end. These, too, should project about the same distance as the screw nails.



The Tanzanian duplicator


Paper Clip
Blanket
Rubber Band
Nail
RUBBER BAND FIXED

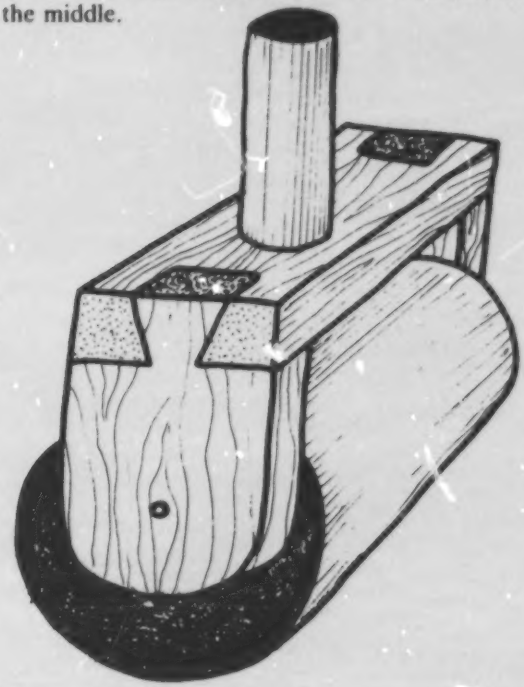

THE MACHINE IN ACTION
Duplicating Paper
Stencil

How to make a roller

You will need a piece of wood 24 cm long. If you can find a cylindrical piece then so much the better. If not then plane it carefully so that you end up with it having a radius of between 2 and $2^1/_2$ cm.

Cut another piece of wood into three pieces, one 26 cm long and the other two between 10 and 12 cm. They can all be about 1 cm wide. The ends of the two shorter pieces should be cut to a semi-circular shape while the other end should have a simple tooth joint which will fit into the larger piece of wood. The two shorter pieces are then joined to the bigger piece to make the roller holder.

You now fit the rounded piece of wood into the roller holder. Two-inch long nails at either end will do this and will allow the roller to move freely. You will need to fix a handle to the roller handle, and this is best placed in the middle.



Preparing the blanket

Cut a piece of blanket or felt measuring 45 cm by 25 cm.

Make four holes at one end so that the heads of the projecting screws come through.

Make four smaller holes at the other end of the blanket matching up with the four small nails at the other end of the base board. Straighten four paper clips and bend them each into a U shape. Slip a rubber band over two of them. Keep these handy for the next stage.

How to Assemble

Fix the piece of blanket on the base board so that bigger holes at one end slip over the heads of the screws.

Insert the bent paper clips through the holes at the other end of the blanket and loop the rubber bands round the nails so that the blanket is stretched firmly and held to the base board. Make sure that one rubber band slips through two of the paper clips and loops tightly over two corresponding nails (see diagram).

You now have the duplicator assembled, plus the roller. The only other thing to do is to fix a handle to the duplicator. Even a piece of thick string, or thin rope, will do for this.

How the Duplicator works

Spread duplicating ink over the blanket until it is well and evenly soaked.

Place the stencil right side down over the blanket so that the holes in the end fit over the screws of the base-board.

Place a piece of duplicating paper over the stencil.

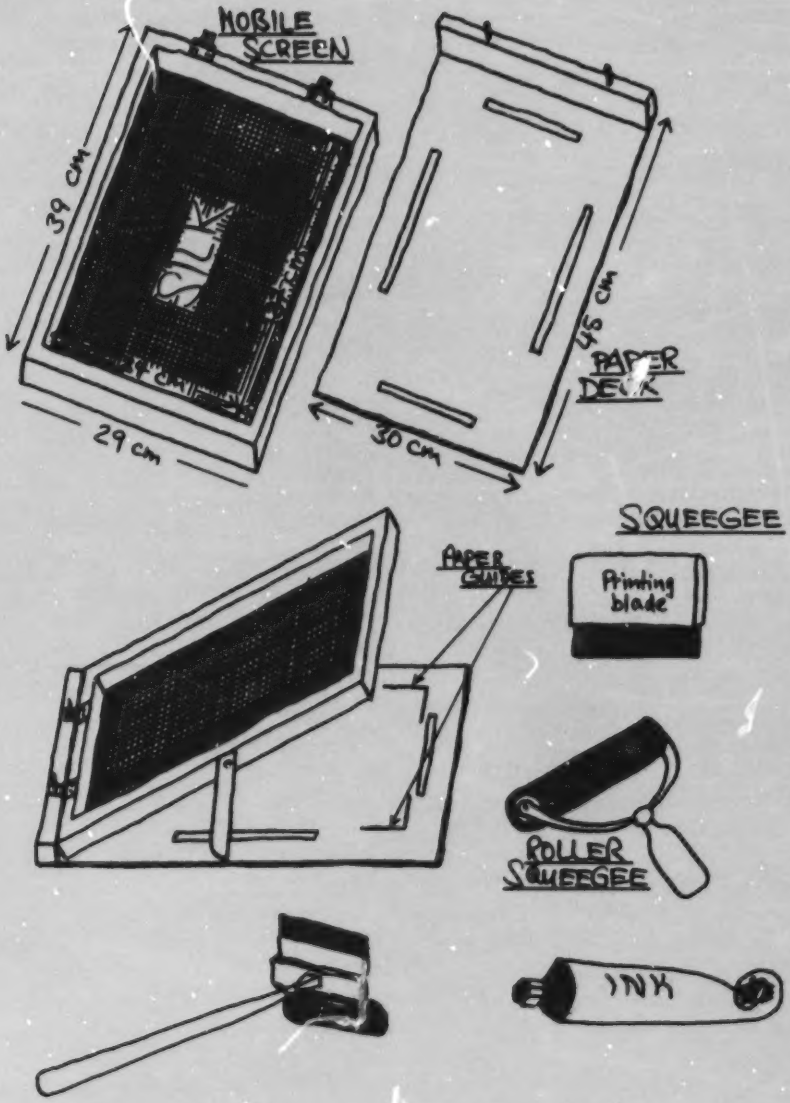
Using the roller make an even roll over the paper. The ink from the blanket will then be forced up through the stencil and on to the paper. Remove printed paper, place another sheet on and repeat.

With a little trial and error you will soon be producing perfectly good duplicated sheets.

The cost of making this machine is very cheap indeed.

Silkscreen Duplicating

A similar machine that can easily be home-made and produces virtually the same effect is the **silkscreen duplicator**. This is really the mother and father of the office duplicator and is the answer for people or groups who have very little funds. In the last few years groups in several African countries have begun using these home-made silkscreen duplicators and they are turning out excellent work. In Niger there are several hundred village newspapers produced by this method. The silkscreen duplicator can easily be made by the village carpenter. The first illustration shows one simple design.


MOBILE SCREEN
39 cm
29 cm
45 cm
30 cm
PAPER DECK
SQUEEGEE
PAPER GUIDES
Printing blade
ROLLER SQUEEGEE
INK

Before you make your frame find out the size of the stencils you are going to use. In fact practically all stencils are in the same size range, but there will be variations in the holes at the end of the stencil where they are fixed to different makes of machines. If you are using a stencil on a flat, home-made machine, this will not matter.

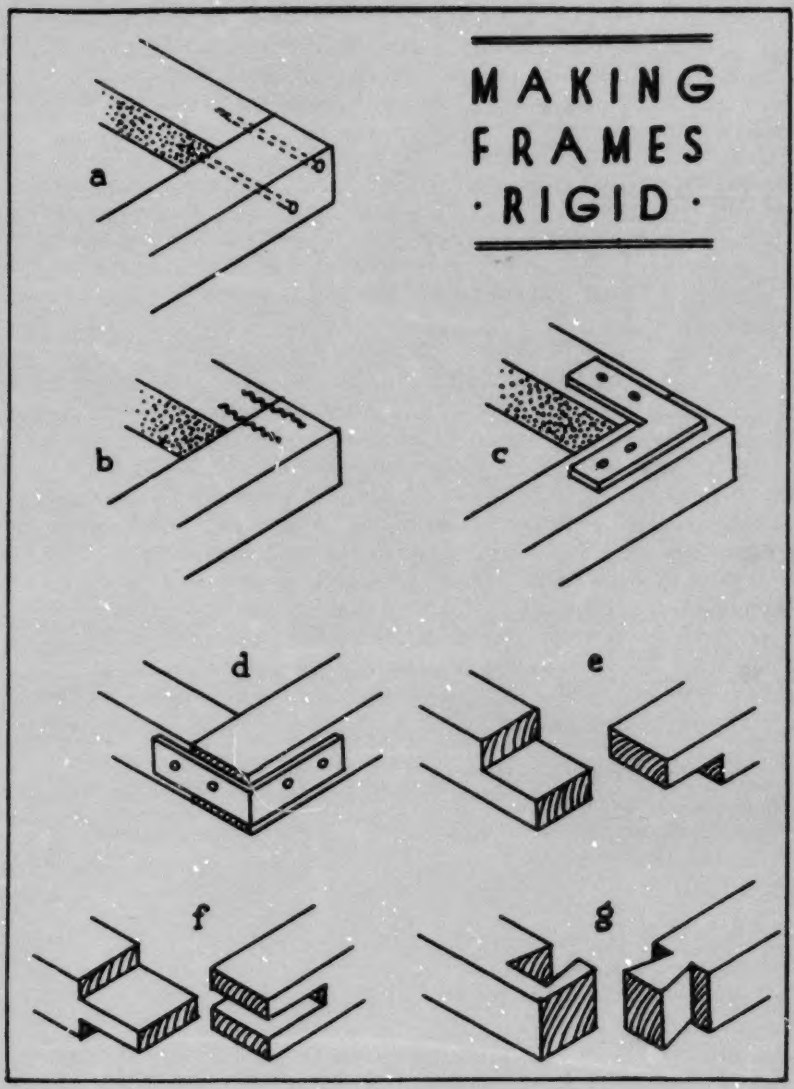
The silk or silk-like material should be stretched taut over the frame and tacked into place. The stencil should then be fixed to the underside of the silkscreen and held firmly in place by sticky tape or brown gummed paper. It is essential to have both the silk and the stencil held firmly in place, otherwise when you start printing one or both may move slightly and produce a blurred image.

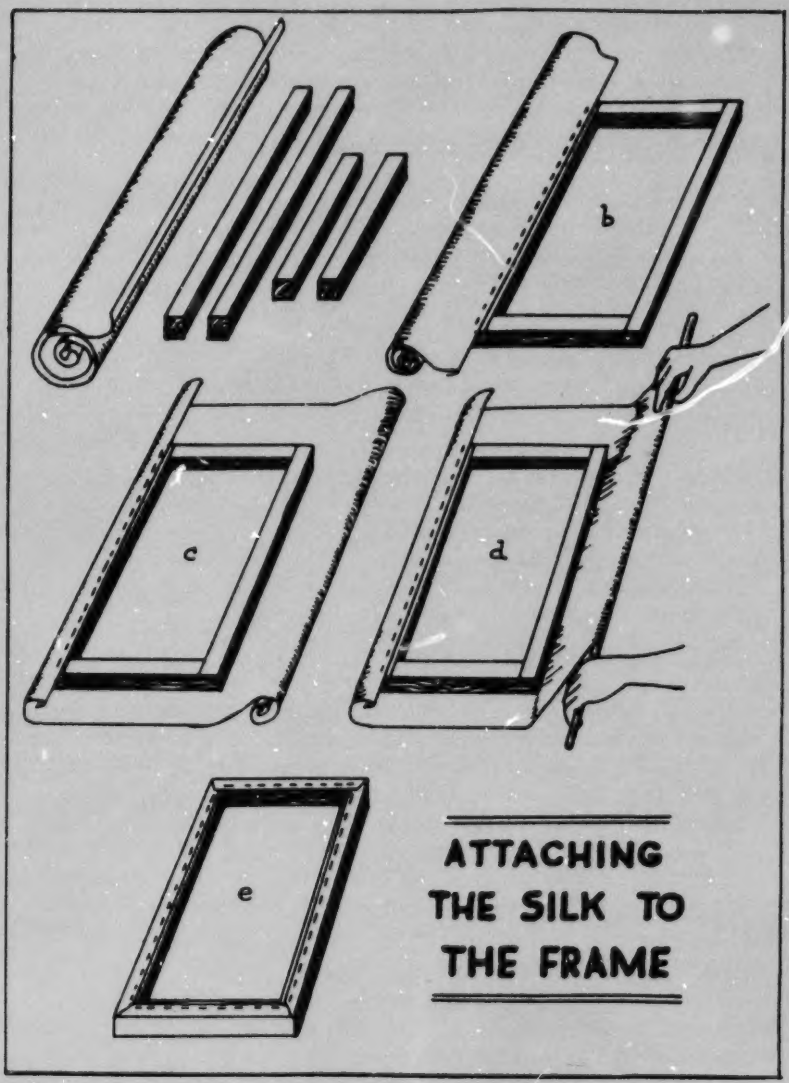
The frame is fixed by hinges to the wooden base and as the illustration shows it is a good idea to have narrow strips of paper inside the base board which will act as a guide for where the paper is to be placed and to keep the paper from moving while you are printing. The printing itself is done by either using a roller or a squeegee (rather like a windscreen wiper). Squeeze some of the duplicating ink at one end of the screen. Your frame and silkscreen should be two or three inches longer than the length of the stencil so that when you first squeeze the ink on to begin printing you can squeeze it at the top of the screen, just off the stencil and get it to the right consistency before beginning to print. The ink should have the consistency of cream. If it is too thick it will not get through the holes of the screen to the stencil and if it is too thin then too much will get through.

Then lift the frame, insert a piece of paper into the guides on the base board and holding the frame firmly down pull the squeegee or roll the roller firmly over the screen. You will need three or four test pieces until you get the ink going evenly through the screen and stencil and on to the paper.

If you are using a squeegee then you will end up with quite a lot of ink at the bottom of the screen. So the next pull should be in the opposite direction, and so on.

This method is the absolute basic system of silkcreening and it can be modified with a little imagination so that the base will hold a stack of paper.


MAKING
FRAMES
·RIGID·
a
b
c
d
e
f
g



ATTACHING THE SILK TO THE FRAME

To do this the frame should have four hinged legs, one at each corner, so that the frame holding the silkscreen is raised or lowered every time you lift or lower the frame. You can then put a stack of as many as 200 sheets of paper in the base and then print away quite quickly, just removing each sheet as you print it.

Here are a few tips to follow until you get used to things:

1) Keep an eye on the amount of ink you are putting on the screen. It must not be too much and equally, it must not be too little.

2) Make sure you keep your fingers free of ink or you will end up with a lot of smudge marks on the finished sheets as you take them off the frame.

3) Get accustomed to the sharp hissing noise as you pull the squeegee over the silk. This signals that you have got just the right amount of ink and are using just the right amount of pressure. A slushy sound as you pull the squeegee means you are not using sufficient pressure or you are not holding the squeegee in the right position, with the blade pressing correctly against the silk.

Stencils can also very easily be made to produce things like posters where only big lettering is required and particularly where you want a design of some sort that it is not possible to achieve with the potato cut Relief Printing described earlier. These stencils are made out of almost any sort of paper, even newsprint. You merely cut out the shape ot the letters or design you want and you fix them to the silkscreen with tape. Once you begin printing the duplicating ink itself will hold the paper flat to the screen. If you wish you can make very much bigger silkscreens than those you will use for producing foolscap typewritten sheets.

This type of stencil is particularly useful where you want bold colour. There are some limitations using cut stencils, mainly when you have a central shape like the letter 'O'. The middle is likely to fall out unless it is carefully fixed to the rest of the stencil by a thin strip. On the market are various makes of plastic material such as Stemplex and Autocut which are double layered. You cut the top layer only so that the centre

of shapes remain fixed. Once the stencil is fixed to the screen the backing sheet is peeled off.

Another way of making bigger stencils for posters or designs is by using what is called a **screen filler**. This is stuff like paint which blocks out that part of the screen you don't want, just leaving the part you do want on which you have drawn your lettering or design.

Another way to achieve the same effect is to put your design on the screen using candle wax or some other form of wax and when it is set spread the screen filler all over the surface of both the screen and the design. The filler will fill all the part of the screen apart from that which is covered by the waxed design. When the filler is dry the wax can be dissolved and you will be ready for printing.

You can use other material besides paper for this sort of silk screening. It is very useful, for example, for putting designs on shirts or blouses and schools with very little money can easily use this method to print their special school badge. When you print on fabric, though, you need to use a dye instead of ink and this has to be made fast so that it will not wash out. One of the best dyes on the market is called **Helizarin** which is made fast by ironing.

If you are printing on a shirt or blouse ensure that you stretch it well so that the image goes on evenly. Put some paper inside the shirt and over the parts that are not going to be printed on. You print the design in exactly the same way as if you were making a poster but you will need more dye and it is probably wise to go over the stencil with the squeegee several times. Once the design is on, hang the shirt up to dry and then iron it with a fairly warm but not too hot iron for several minutes.

Your Own Print Shop

For very many print requirements it is perfectly possible to set up your own print shop and produce them yourself. It is much better if this is done by a group of people with a common interest though there are successful print shops in many countries which are shared by different groups. For example, a church group, a farmers' group and a women's association might jointly finance what needs to be bought and they can then either use the equipment as they need it or if there is sufficient work between the three groups even employ somebody part-time.

But all over the developing world more and more small groups of people who were really driven to setting up their own print shop because of the rising costs of having their print needs professionally done are finding a great sense of achievement and satisfaction which thus gives them an even greater driving force for the work they are doing. Many of them are producing excellent printing.

The first step any group should take before they get very far towards establishing their own printshop is to consider exactly what their print needs will be and what they are spending on print at the moment. It is certain that costs of everything are going to continue to rise so that whatever you may be spending on print today it is a sure bet that you will be spending more and more as time goes on and particularly if your group's activities develop and you wish to publish more material or more frequently.

First of all, space. You will not need very much space but you should try and ensure that wherever you establish your print shop it is used solely for this. It is always very unsatisfactory if you have printing machinery in, say, an office which other people are using for other purposes. Not only are you likely to lose bits of equipment but very often with printing there are different stages of a job. You may have just finished printing the sheets of paper and these need to be left before folding or stapling. If some other people are using the office you are bound to find things will get into a mess.

The cheapest and easiest form of do-it-yourself printing is, as we said earlier, stencil duplicating or silkscreening. If you can afford it have two duplicators not only as insurance against one breaking but to use one with the standard black ink and the second for another colour.

It would be far cheaper to buy up a stock of paper that you know you will need for a good time ahead, even a full year. Not only is it cheaper to buy paper in this sort of quantity but, again, you will be ensuring against the certain rise in prices. But keep it dry and away from the hot sun or it will become crisp and difficult to use. For stencil duplicators or silkscreening you need a special paper which soaks up the ink well. You normally buy this in **reams**. One ream is 500 sheets. Although white is the standard colour you will often find it possible to obtain other colours. For offset litho printing almost any sort of paper is suitable. The quality of paper in terms of thickness is by its weight and if you are planning to print on both sides of the paper then you will obviously want paper heavy enough for the impression on one side not to show through to the other.

Generally speaking the best thickness for offset litho or letterpress work is between 71 grams and 85 grams. Below is a guide to the most commonly used paper sizes. Notice how most of them have a code letter and number. These are becoming universally accepted.

	DECIMAL INCHES	MILLIMETRES (METRIC)		DECIMAL INCHES	MILLIMETRES (METRIC)
A6	4.1 x 5.8	105 x 148	A2	16.5 x 13.4	420 x 594
A5	8.3 x 5.8	210 x 148	RA2	16.9 x 24.0	430 x 610
⅔ A4	8.3 x 7.8	210 x 198	SRA2	17.7 x 25.2	450 x 640
A4	8.3 x 11.7	210 x 297	Quarto	8.0 x 10.0	203 x 254
A3	16.5 x 11.7	420 x 297	Foolscap	8.0 x 13.0	203 x 330

There are other traditional sizes for bigger work and these are shown in inches.

Crown 15 × 20
Double Crown 20 × 30
Quad Crown 30 × 40
Demy $17^1/_2 \times 22^1/_2$
Small Demy $15^1/_2 \times 20$
Double Demy $22^1/_2 \times 35$
Quad Demy 35 × 45
Double Foolscap 17 × 27
Quad Foolscap 27 × 34
Imperial 22 × 30
Medium 18 × 23
Double Medium 23 × 36
Post $15^1/_4 \times 19$
Large Post $16^1/_2 \times 21$
Double Large Post 21 × 33
Royal 20 × 25
Double Royal 25 × 40

If you can possibly afford it and you have electricity, buy an **electronic stencil cutter**. This is a machine with a cylindrical drum on to which the original artwork – that is the typed page or illustrations – is fixed. A photocell scans over it and a needle cuts the minute holes in the stencil. The machine also reproduces photographs though not awfully well. But it is excellent for drawings and diagrams.

Besides duplicating equipment you can make a number of different sized silkscreens from the standard size which will take a typed foolscap sheet up to something much larger for quite big posters or wall charts.

Doing silkscreen work with a big frame requires quite a bit of room. For a lot of silkscreening work, and particularly if you are putting patterns on to material like shirts or blouses, you will need a clothes line on which to hang the finished work while it dries and this should be done inside as you do not want dust settling on the pattern. Except for the most basic jobs such as producing single sheets from a homemade flatbed duplicator or turning a handle of a mechanical duplicator, always

have two people working together. One can then concentrate on the actual printing while the other is taking the finished product away and stacking it up or hanging the silkscreen products on the drying line.

Once you have mastered the techniques of duplicating and silkscreen printing you are likely to find other individuals or groups will be coming

An electronic stencil cutter

to you wanting their work done and the profits from these jobs will be a very useful contribution to keeping your overall budget down.

If you have need for a lot of small jobs – small, that is in terms of size and the number of words to be used, such as wedding invitations – you might consider getting some **Letterpress** equipment. There is a lot of old letterpress equipment on the secondhand market as well as Letterpress type. But it is quite skilled work setting type by hand and unless you are able to send somebody to a printer to get some basic training in this – about a month would be required to learn how to put together something like a simple invitation card and then print it on a proofing press – you should not get into **Letterpress**.

Small offset litho presses have caught on rapidly all over the developed world and it is rare now to find a high street anywhere which does not have a shop where you can drop in and order your printing needs like letterheads and handbills as if you were buying eggs or bread. These sort of operations are bound to catch on in the developing world but, of course, they require a good deal of capital and a certain amount of training for the operator of the machines. They are electrically driven so obviously not suitable for very rural communities without electricity. The quality of work they produce is excellent and they are best for jobs requiring several thousand copies, though perfectly practical for much smaller runs.

You will not need to be told that virtually all developing countries have serious balance of payments problems and licences to buy equipment like this are always difficult and often impossible to get so if you are interested in these small offset litho machines you should first enquire whether they are even available in your country. If they are then have a talk with the supplier and it may be that if you have a practical proposition and particularly if you represent a responsible group of people payments can be spread over a long period and paid for out of the money you make from the work you do.

Suppliers of these machines always provide a course of instruction for the operator. This is generally four or five days. The same is true of suppliers of duplicating machines though the instruction period here is no more than a couple of hours.

This is about the limit of the do-it-yourself print shop. Beyond equipment beginning with homemade duplicators and silkscreens on to mechanical duplicators and offset litho machines lies heavy expenditure and skills that require years of training. These are not for the amateur.

III. Dealing with the Printer

If your printing needs only occur occasionally and you do not feel inclined to tackle them yourself or they are more complex than the amateur can reasonably be expected to do then you will need to go to a printer. Bear in mind there are different printers for different types of jobs. The printer you may ask to print wedding invitations is unlikely to be the same man who produces magazines, though some will do both.

First of all try and find a printer you feel will be more used to the sort of job you want done. The best way to find a printer is often to ask other people you know have used one. There are an awful lot of unreliable printers about and there is nothing more annoying than giving a job to a printer and then being messed about for weeks on end with broken promises and finally ending up with a product which is disappointing.

Before you go to a printer make sure you know exactly what you want done:

How many copies?

Just one colour or more? More than one colour is expensive.

What sort of paper? There are many different types available from cheap newsprint to those with a smooth finish. A good price guide is the smoother the paper the more expensive.

Will you need any illustrations – pictures or drawings?

If it is something like a church magazine you want printed try to assess beforehand approximately how many pages you want and how big the pages are to be.

If there are to be several pages, do you want these stapled together with one staple in the middle or two staples, one an inch or two from the top and the other the same distance from the bottom of the page? The price can be different.

You will establish a much better working relationship with the printer if you produce copy which is clean and clear. What printers call 'dirty' copy, where something has been badly handwritten with lots of things crossed out and other things inserted, takes longer to set and this costs much more.

Have a good talk to the printer and be guided by him but keep in mind that you are the only one who knows what you want when the job is finished. Any good printer will show you samples of paper and better still samples of paper which has been printed on.

Ensure that the paper you decide upon takes printing on both sides well. Too many print jobs have type and pictures which can almost be seen through to the other side of the paper and make reading difficult.

You will certainly need advice on whether the job you are having printed is to be produced by letterpress or by offset litho. Generally speaking small jobs are set letterpress and bigger jobs are produced by offset litho.

You may be surprised to find that the price quoted for your printing job will vary very little between an order for, say, 500 copies and 1000 copies. This is because three quarters or more of the cost is setting up the type and getting the job ready for printing. Indeed, it would cost you almost as much to produce one copy of anything printed as it would several hundred.

Any good printer will be able to advise you on the most practical size of the page if you are having a booklet or magazine printed. This is because he will have different stocks of paper which will take different numbers of pages on each sheet, sometimes four and even as many as eight. You do not want to select a paper which is of a size which means that quite a lot of blank paper will need to be cut off because it cannot accommodate sufficient number of pages of the size you want.

If you are having a print job with a number of pages you should estimate in even numbers of four, eight or 16. Often the odd four or eight pages can be a costly extra. As we said, an extra colour ink as well as the basic black can work out quite expensive. For many types of jobs a good, cheap compromise to achieving a colourful effect is to have a **tinted colour paper** – a fawn, a pale green or an orange.

Try and see a job your printer has already done similar to what you want. You might cut costs a little if you are prepared to do some of the finishing yourself, that is just collecting the assembled printed sheets and folding, cutting and stapling them yourself. Even a small guillotine for cutting the edges of a booklet can be quite expensive so unless you are producing a regular publication you will not want to spend that much money.

But depending upon who the readers of what you are having printed are then you may be able to compromise a little on the standard of finish. For example, if you are producing a monthly or quarterly little eight page publication for a farmers' co-operative or a trade union then you may not feel it is necessary that it need be expertly trimmed. If you have smooth, straight ruler and a strong knife with a very sharp blade and there are no more than 200 to 300 copies of the magazine you can trim them yourself, or if you are particularly careful as you put the pages together you may feel that if they are slightly uneven it does not matter.

One final word: try and get quotations for your print job from three different printers. Prices can often vary a lot, particularly if a printer has a machine standing idle that he wants to keep busy. He will often drop his price.

The printer will show you a selection of type faces both of big lettering and the small lettering such as you will need for a magazine or booklet. There are hundreds of different type faces for headings and quite a lot, too, for small setting. Do not have anything too fancy in the way of headings. A good clear type which is unmistakable is much the best choice particularly if some of your readers are not all that used to printed matter. Printers often have a selection of decorative borders and you can use these to add a little extra to the appearance if you wish – but don't overdo it.

Remember that you are going to a printer to produce something for people to read because you have some message for them. Never forget that it is the message that matters, not the fancy way it is printed.

For the smaller lettering such as is used in this book and almost every other type of book there are two type faces, though in different sizes. These are called **serif** and **sans serif** faces. The two different styles are these:

It has been found that most people read serif faces more easily than sans serif faces.

How to start your own Publication

As we saw at the beginning of this book the people able to read and write – the literacy rate – in the developing world is abysmally low and though things have been improving in recent years there are still far too many countries with far too many people who never get the chance of having regular printed matter on which to practise the literacy they have acquired at school.

It sounds rather grandiose to say "Very well then, we will start our own publications" but it is not nearly so grandiose as it may seem provided you go about it sensibly.

There are two types of publications which can be produced by any intelligent person or group in the rural areas – or, indeed, even in the urban areas because although there are likely to be newspapers and magazines in the towns and cities, these generally take a wide general view of things and anyway they still do not reach enough people.

The first type of publication which it is possible to produce is that which will serve a special interest group. This could be a farmers' co-operative, a church organisation, a trade union or any other special groups with special interests who would benefit from having some publication which caters specifically for those interests. This sort of specialist publication is best produced on a monthly or even quarterly basis.

The other type of publication which it is possible to produce – and which more and more people are producing – are modest little rural newspapers. One hundred or so years ago life – and literacy – for many of the people in the developed countries of today was not very different from the life style of many people in the developing world now. The industrial revolution in Europe and North America was still in its early stages and a great many people lived in the rural areas and depended upon some form of agriculture for their living. These people rarely, if ever, went to the towns. All their interests were in their home villages or small towns where they knew the local people and were involved in what was happening.

In the same way as in the developing world today a lot of these people were either illiterate or semi-literate, for although they may have had a few years schooling, once they left school and started work there was just nothing to read.

The great leap forward to literacy for these people in countries as far apart as North America and central Europe was the appearance of what was known as the **"penny press"**. The capital cities and some of the big towns of these countries had been used to daily newspapers for quite a long time but they rarely reached the rural areas for exactly the same reasons as the daily newspapers of the developing world of today rarely reach into the rural areas of their countries. The two main reasons why this was so a hundred years ago in North America and Europe and is true today in the developing world is because:

1) It is a very expensive business sending newspapers a long way.

2) Even if you can get newspapers to the rural areas they are too expensive for most people and full of a lot of things which they do not understand and thus have no interest in.

So let us now have a fairly detailed look at the way a **newspaper for rural people** might be planned and produced. There are two aspects to any form of publishing; the administration and the editorial content. Even before you begin to think what you might put in your little rural paper you should take time and trouble to look at the administrative side.

First of all you must define your market. That means you must decide how big an area you are going to try and cover in the collection of news and then the distribution of the paper. This will vary according to different circumstances. If you live in a village or small town with a population of all ages varying from 200 or 300 to 2000 or 3000 then you would be well advised to restrict your area of operation to just your village or town. This will mean you will never have to go very far to get whatever news you are after and just as important you will be able to get your finished newspaper all over the readership area very quickly. And most important of all it means you will be able to reach anybody who owes you money for the papers very easily!

On the other hand if you feel you want to produce a newspaper for a wider area, perhaps taking in four or five villages or even two or three small towns, then you are going to have to plan things much more carefully.

By and large the most successful rural newspapers now being produced in many countries of the developing world are those which serve just their own village or small town. "Small is Beautiful" often applies to projects serving the rural areas of the developing world.

Let us assume then that you are going to produce a newspaper or a news-sheet for your village. First of all you must decide how many copies you think you will be able to sell. If the population of your village is, say, 1000 men, women and children this will probably mean that about half

of them are under fifteen and of the remaining 500 most will be married to each other. Do some market research and talk to intelligent people like the schoolmaster or the local priest and you may then well end up by deciding that 100 copies of your newspaper would be quite sufficient. Research shows that as many as six or seven people may look at each copy.

Your next decision must depend upon the cost of production and how often it is to come out. The most successful rural newspapers in the rural areas are just one sheet of foolscap printed on both side. This may not sound very ambitious but for the people who are going to read it, provided the contents are relevant to them and hold their interest, it is a considerable achivement and if they are only semi-literate it is still going to take them quite a long time to read.

How much you charge for your **news-sheet** will probably depend on how much it costs to produce. You will certainly want to get your outlay back and make a little profit but you should abandon any ideas that little publications like this can ever be real money-makers.

Now what are you going to put in the news-sheet? This is the question that confronts every editor of every publication in the world, whether they are producing one single sheet of paper or some of the huge American Sunday editions of newspapers which may have as many as 200 pages five or six times the size of your foolscap sheet.

Bear in mind one over-riding factor when you are gathering the contents for your news-sheet; people are much more interested in other people than they are in things. Try and make your readers feel that every time they look at your news-sheet it is rather like holding up a mirror in front of the village and getting back a picture of what is going on – what the villagers are doing.

You will need to have a good contact with the principal people in the village like the store-keeper, the priest, the policeman (if there is one) or anybody whose job is bringing them into contact with a wide circle of people. You must call on these people regularly and find out what is going on. You will not want (and there will not be room, anyway) long accounts of anything. The best rural newspapers are rather like diaries.

You can say an awful lot in just a dozen words. Look at these few examples taken at random from different rural newspapers in Africa and Asia:

Mrs Charlott Kamau gave birth to twin boys on May 14.

Three sheep owned by Mr Regis Onygolo were killed by jackals during the night of September 2

Fire destroyed the mealie store of St Luke's church last Thursday. Father Kinuya said there were more than 50 bags of mealies lost.

Almost as important as giving items of news like this is the need to tell your readers what is *going* to happen. Perhaps a minister or politician is coming to speak. You hear government has plans for a new road in the area. There may be an extension to be built on to the school which most of the children attend. Details of forthcoming festivals and other events in the area should be regularly carried.

Apart from your contacts in the village itself you should be in regular communication with somebody like the government information officer in your area who can inform you of all important coming events or government announcements. Whatever you do resist any temptation there may be to print anything than other news or useful information. People are not likely to be very interested in your views.

If your news-sheet is just one foolscap piece of paper printed on both sides then if it is possible try to get a stencil typed. If it is not possible then spend a lot of time practising how to write clearly on a stencil and though it may take you quite a long time it is much better to print every letter separately. For people who are not very good at reading it will be extra hard for them to decipher ordinary handwriting which often does not come out very clearly on a stencil anyway.

Above all, start modestly with hopes that you may grow rather than attempt to produce something which is going to take more time than you may have and require more experience than you have yet got. It is an easy step, once you have successfully produced a few issues of a single

page news-sheet, to double the size by producing another single sheet and stapling them together at one corner.

If you ever grow to two sheets then it may be time to move away from purely the news-diary items, and include such things as short pieces on health care or hygene, tips on new agricultural tools becoming available and a whole lot of other useful material which will be of interest and use to your readers.

How often you produce your news sheet will vary according to how you think your budget will work and how much time you have. You will certainly never produce a rural newspaper more often than once a week. A good interval between issues is two weeks. A month is rather a long time between issues because people have often lost interest in something that happened three or four weeks earlier.

It would be well beyond the resources and experience of amateurs to attempt to produce a rural newspaper serving a fairly wide region, but it may be useful to describe how such an enterprise was planned and executed recently in Africa. The West German Government provided UNESCO with funds to start a rural newspaper somewhere in Kenya. Kenya is well supplied with daily and weekly newspapers but for the most part these are aimed at city readers and deal with things which townspeople are not interested in.

So the region selected for the pilot project was almost 200 miles from Nairobi in the middle of the busy tea-growing area. The towns are very small and the whole area depends almost entirely upon the tea industry with many thousands of people living on the huge tea estates. Literacy is very low among these tea workers.

Because there was sufficient money available it was decided to use an offset litho machine to print the paper but the type-setter was merely an ordinary typewriter which produced pages that were then photographed and developed on to the metal plates for the offset litho machines. The headings for the stories were stuck in by Letraset. There are several different makes of these types available, or headings can be handwritten.

Government information officers were the reporters and sub-editors for the fortnightly publication but a specially trained printer had to be used because the offset litho process is not for amateurs. The head of the project first had to decide how big an area the paper was going to serve. He felt that it would be impractical to send reporters more than one hour's driving from the office so he drew a circle about 30 miles round the centre point of production and this was to be the area where news would be collected and the paper would be sold. This area incorporated four or five little towns, many villages and all the large tea estates.

The page size was 9 inches × 13 inches and this meant it was possible to print two pages at a time on the **Rotaprint offset litho machine**. With a 12 page issue there were thus six metal plates, each containing two pages. Because typewriter type is much bigger than normal newspaper type it was decided that no story should ever be more than about 300 words long and that ideally stories should be much less than this – very short, one or two paragraph news items of three or four inches. The pages were divided into three columns $2^3/_4$ inches wide. It took the typist a little while to type so that the words fitted inside the column width and, of course, many words were too long and had to be hyphenated.

The project worked fairly well and finally settled down with a fortnightly sale of about 8000 copies. With as many as eight people reading each copy (very often those who could not read had the paper read to them by those who could) this meant it was reaching a very large number of people.

But as you can see, this was a rather ambitious project which required an expensive printing press, full time staff and transport to move both the reporters and the finished papers about.

A good halfway house between the regional paper and the single sheet printed on both sides on a handmade duplicator is a project recently begun in Zimbabwe. The government is anxious to develop the rural areas and it was thought that one of the ways to encourage a sense of community would be the establishment of little rural newspapers.

Nakumbuka ! Nakumbuka !

Kabla ya Wazungu kufika Kericho

Mzee Kipleitich arap Tele.

KABLA ya Wazungu kutuletea elimu humu Kenya, hapakuwa na habari zilizoandikwa juu ya mambo yaliyotokea zamani. Kata hivyo, wale watu wenye kukumbuka mambo ya kale wana mengi ya kusema juu ya wakati wa zamani sana, kama vile Mzee Kipleitich arap Tele.

Ingawa sasa umri wake ni miaka 90, anakumbuka vita vya kikabila maafa ya njaa,Wazungu walivyokuja humu, dini, elimu na ukulima wa kisasa. Alizaliwa kijiji cha Kaplelach karibu na Litein mnamo 1890, muda mfupi baada ya vile vita vinavyojulikana sana, "Migori", vilivyokuwa kati ya Wagusii na Wakipsigis. Wagusii walishinda katika vita hivyo. Mzee huyu anakumbuka jinsi Wazungu walivyokuja humu wakati wa ujenzi wa reli kutoka Mombasa kwenda Kisumu. Njia hiyo ilifika upande wa Nandi mnamo 1900, na maasi ya Wanandi yakaanza, yakiongozwa na Laibon Koelegen, ambayo yaliendelea kwa miezi sita.

Anakumbuka Wazungu walifiteka sehemu inayoambatana na njia ya reli baada ya maasi hayo. Kituo chao kikubwa kilikuwa Kipkelion halafu wakaelekea Kericho. Waliofika kwanza walikuwa Wamisheni wa African Inland Mission katika miaka ya mwisho ya 1890 nao Wakipsigis hawakuwapinga.

MISHENI YA KWANZA

Mzee huyu anakumbuka Mzungu mmoja wa misheni aliyeitwa "Handison" aliyejukana kama Fundi, ambaye alianzisha kituo cha misheni cha Chagaik na akashauri watu wa huko wapeleke watoto wao skulini. Watoto wa Machifu ndio waliopendelewa zaidi ya wengine.

Mnamo 1918 kituo cha Chagaik kilihamishwa hadi Litein na wakati huo Kericho ilikuwa imefanywa Boma.Arap Tele alianza kwenda skuli akiwa umri wa miaka 25 na hata sasa anaweza kusoma akivaa miwani.

"Kapteni" anakumbuka jinsi ugonjwa usiojulikana ulivyowasua watoto wake watano. Anakumbuka njaa kuu tatu zilizoleta hasara kubwa kote Kipsigis ambazo zilijulikana kama Kimout Sigiryet, Kimouito na Rubet ab gosobek ilileta kuosna baina ya Wakipsigis na Wagusii ambapo Wakipsigis walilazimika kuuza mabinti wao kwa Wakisii wakibadilishana na nafaka ya wimbi.

HAKUNA MAGARI, HIVYO MIWA YAOZA

ZAIDI ya ekari 550 za miwa iliyokomaa zaidi zinaoza katika mashamba ya vyama vya ushirika vya Kipsitet na Kaitui katika mtaa wa Soin kwa ajili ya ukosefu wa uchukuzi.

Sababu nyingine ni kwamba mwambo wa sukari wa Muhoroni hauwezi kutosheleza miwa yote inayotoka katika mashamba ya Muhoroni na ya Wakulima wa Kando yake.

Wanya miwa hiyo ambao ni jumla ya wakulima arobaini walipewa mkopo wa shilingi milioni tatu na nusu kutoka kwa serikali kupitia Wizara ya Ukulima,Agricultural Finance Corporation na Credit Production cooperation Scheme.

Kufuatana na maneno ya wakuu wa Chama cha Ushirika cha sehemu ya kukuza miwa, mikopo inayotolewa kwa wakulima hurudishwa miwa inapovunwa na kupelekwa mtamboni. Mkuu wa chama hicho, Bw. Joseph Sambu alisema kwamba mtambo huo huwashauri wakuzaji miwa katika sehemu hiyo juu ya wingi wa miwa inayovunwa, hali wale wasimamizi wa sehemu ya kukuza sukari huchagua wakulima wa mavuno ya miwa.

Uchunguzi uliofanywa na "Sauti ya Kericho" umeonyesha kwamba miwa huchukua miezi 22 mpaka 30 kuwa tayari kuvunwa lakini mingine imeketi katika mashamba hayo kwa zaidi ya miezi 36.

Wakulima walisema kwamba shida kubwa ni ukosefu wa barabara nzuri ambapo kwa sasa trakta za watu binafsi haziwezi kutumika kupeleka miwa mtamboni. Wanaogopa kuharibu magari yao kwa kupitia njia zisizofaa.

Kadiri ya maneno ya mkulima mmoja mashuhuri wa Kaitui, Bw. Kiprob Kirui, serikali yapaswa kuchukua hatua za haraka kuondoa shida hizi kabla ya kuwa mbaya zaidi. Alisema wakulima watakufa moyo wakiona miwa yao inakaa mashambani kwa muda mrefu bila kuvunwa.

'USINICHAPE' MWIZI ASEMA

MWYANG'ANYI aliyeambia korti ya Kericho kwamba alikuwa mtoto wa peke katika jamaa yake na kuisihi korti isimwongezee adhabu ya kuchapwa viboko sita. Aliamriwa pia kuwa chini ya usimamizi wa polisi kwa muda wa miaka mivili baada ya kumaliza kifungo chake.

Giti Magige alifikishwa mbele ya Hakimu Mkazi wa Kericho, Bw. E.M. Githinji, akishtakiwa kwamba mnamo Decemba 29, 1979,huko shamba la Chemasingi,Magige akiwa na wengine ambao hawakuwako kortini ,alimwibia Tobias Otieno Shs.159.00 na saa ya mkono ya thamani ya shs.229.00.

Mshtakiwa alikanusha kosa hilo

Akitoa hukumu, hakimu aliesema alimfikiria mshtakiwa kama mkosaji wa kwanza. Walakini, akaongeza hakimu, mali iliyoibwa haijapatikana.

A page of a rural newspaper printed in Kenya by offset printing, but with the type set on an ordinary typewriter.

This is how the pilot project works and if it succeeds it is likely that similar little papers will be launched all over the country. It is a good blue-print for virtually any Third World country.

A town about 60 miles from the capital, Harare, was selected as the centre. This has a population of some 10,000 people with a good sprinkling of shops, a little hotel, two or three churches and is typical of many thousands of such rural towns throughout Asia, Africa and South America. It has a district council whose members are elected and it even has an education officer for the region stationed there. Virtually its only industry is agriculture. Most ot the people farm for themselves and bring their produce to town once or twice a week. The headquarters of the rural press project is in one room (and this is just a desk big enough to hold a duplicating machine and typewriter). Because there was enough money to buy something a little bigger than an ordinary office duplicating machine which just produces one sheet in the same way as the flatbed home-made duplicator, a bigger rotary duplicator, a Gestetner 480, was bought. This takes a stencil twice the size of an ordinary foolscap sheet of paper and its great attraction is that it can thus be folded down the middle so that each sheet of paper ends up with four pages, that is pages 1 and 4 on one side of the sheet and pages 2 and 3 on the other. Paper this size is called A 3. Folded in half it becomes A 4. Thus, each of the four pages were size A 4.

Although the project proved successful, one lesson learned was that it would have been easier to have produced the newspapers on A 4 size paper, printing on both sides and stapling two sheets together to make four pages. With A 3 size stencils it meant having a typewriter with at least an 18 inch carriage, whereas even a portable typewriter will take an A4 stencil.

Of course, there were advantages in having the double size because that meant that the wide space down the centre between pages 2 and 3 could be used. If you look at many tabloid newspapers you will see that the two centre pages open up virtually to appear as one larger page because this centre space has been used. If the Zimbabwe project stencils were to have been handprinted rather than typed then the problem about finding a big enough typewriter would not have applied, of course.

In addition to producing a fortnightly for the town paper it was decided to print two 'country editions' at much smaller centres, one about 10 miles to the west and the other about the same distance to the east. Even in a distance as short as 10 miles the interests of people can vary widely. You would be much more interested if your nextdoor neighbour broke his leg than if one of the leaders of the council 10 miles away was knocked over by a bus and killed. A market survey suggested that up to 1000 copies of the town edition might be sold and possibly 500 each of the two country editions.

This is how the project began:

Someone with experience of starting rural papers in other parts of the developing world sought out the two most likely correspondents for the two country areas. These both turned out to be school-teachers. The person selected in the town was the education officer. For a full working week, Monday to Friday, they all got together in the education office where the outsider with experience showed them exactly how the paper would be produced and discussed with them what they felt the contents should be. They all wanted separate names for their three different publications to emphasise their local nature. The Gestetner 480 machine was demonstrated by a Gestetner salesman from Harare and the three trainee publishers became thoroughly conversant with it after a few hours.

The machine itself was to be permanently situated in the education office. One of the two schoolmasters from the districts had access to a typewriter and he felt confident he could produce his own stencils and then send them in by bus to the education office to be printed. The other teacher felt he could not find a typewriter and anyway he could not type so he would gather his material and send it in by bus where it would be typed on to a stencil for him.

Although the three little papers are quite separate the inside two pages, pages 2 and 3, all carry the same material. This is not news in the sense that it is about what has just happened or even what is going to happen but a collection of useful information about basic hygene, the changes in the bus timetable, tips about new agricultural processes and

even some space given over to trying to explain the basic English names for things in the local language, which is Shona.

Although the two teachers make suggestions about the contents for these two 'feature' pages the final responsibility is with the education officer as he has access to this sort of material and time to sort out sources where it might be found (eg the Ministry of Health, Ministry of Agriculture, Ministry of Development etc).

The front and back pages of all three editions were totally different and contained news items about the three different places.

Although during the week's instruction before publication started all three men were shown how to produce the papers, in practice it is the education officer who is a sort of editor-in-chief making sure that the news fits into the pages, that the headlines on each item are properly printed using a plastic letter guide (see page 26) and generally ensuring that the three separate editions all end up legible and ready for dispatch.

The two country editions are returned by bus, where schoolboys run round the village selling them for the two smallest coins there are in Zimbabwe. The same method is used in the town. It will take several months before the Zimbabwe project proves itself but the plan is that once things are running smoothly the local people themselves should be left to run the little papers.

It has needed a fair bit of money to launch this project but once the machinery is purchased there is every reason to hope that day to day running costs will be covered by the income from sales.

But whether you are planning a single sheet, double-sided newsletter or something rather bigger, you should always make a 'dummy' copy first, on ordinary paper. This means typing or writing all the items, plus all the headlines, on plain paper the same size as the finished product will be. If you do this you will be able to ensure that everything fits just right. If you don't do this, then once you have started on your stencil and things begin to go wrong you will have to start all over again.

From the manuscript to a finished publication

How to get quotations

The rudiments of printing have been dealt with in the first part of this book. Now we intend giving some practical instructions for those who either do not have a printing press of their own or who feel they really could not tackle the technicalities but who have the necessary funds to give the job to a printer.

Here we want to demonstrate step by step what a publisher or an editor should do to go from a manuscript to a finished publication. This will be done by taking different publications as examples:

booklet or book,
folder or leaflet,
periodical or magazine
and a little newspaper.

If one is keen to have a creative share in the printing process, put one's own ideas about the appearance of a publication into practice and, above all, save money, one must have some knowledge about how to go about things with a printer.

A. Booklet or book

Let us start with a **booklet or a book**. As already mentioned, it is advisable to try and get **quotations** for your print job from three different printers. Better get hold of a copy which looks similar to that you want to get printed. Ask the printer to give you a quotation on that basis. You will have to tell the printer the number of copies to be printed and the number of pages each copy will have. If you do not have at hand a booklet similar to the one you want printed, tell the printer the following:

1. **Volume**
2. **Number of copies**
3. **Format**
4. **Processing**
5. **Print colours**
6. **Paper**
7. **Type matter and printed area**
8. **Illustrations**
9. **Packaging and delivery**

But what does each of the nine points really mean?

1. Volume

means the number of pages the book will have. This number should be divisible by 4 – for instance 100 pages, 128 pages, 136 pages. The reason: the page-sheets are, as a matter of rule, not printed separately but on sheets of 4, 8, 12, 16 or more pages depending on how big a printing machine is. The sheets from the press are first folded into sections

and then cut off. If prior calculation does not have a figure which can be divided by 4 it is just rounded off. This can mean that the finished book end has two or three blank pages – and that happens quite often.

Indeed it is not easy to ascertain in advance the exact number of printed pages a typewritten manuscript will make. Hence one should ask the printer to quote the difference in price if the book should have four pages more or four less.

However, the number of printed pages resulting from a typed manuscript can be determined only if one is clear in one's mind about the size of type to be used in the book, the length of the line and the number of lines on a page.

Once one has decided on the type size (more of this under point 7) and the length of the line (which is about 110 mm in case of books in A 5 format), you can ask the printer how many letters each line will have on average. You can count up the number of letters in ten lines and take an average.

A similar way of estimating length is to ask the printer to give you a paragraph of printed work set in the same type as you think you will want and over the same line width. Then you can count the number of words in each line, find the average and do your reckoning from that. You will not be far out if you do things this way.

Further calculations can easily be made on the basis of a proportional equation. For instance, if my manuscript has 200 pages with 40 lines each and 60 strokes per line, this amounts to 8,000 lines with 60 strokes. If one line in a book has 75 strokes on average and each page 50 lines the following computation will have to be done:

$$\frac{60 \text{ strokes}}{75 \text{ strokes}} = \frac{X \text{ lines}}{8{,}000 \text{ lines}}$$

This is an inverse proportion since the number of pages in a book will be less than those of the manuscript. One knows from school days that a proportional equation is done by cross multiplication. Thus

$$\frac{60}{75} = \frac{X}{8{,}000}$$

$$60 \times 8{,}000 = 75\ X$$

$$X = \frac{60 \times 8{,}000}{75}$$

$$X = 6{,}400$$

Hence in the printed book the manuscript will make up 6,400 lines. Since each page has 50 lines the number of book pages will be 128. In this case we are lucky; for, 128 can be exactly divided through 4.

(This computation can be easily done by those being able to use a slide-rule or the disk equivalent)

However there is hardly ever a uniformly typewritten manuscript for ascertaining in advance the precise number of pages the printed book will have. You have to be content with an estimate. For that reason, it is worthwhile – as mentioned earlier – to get a quotation from a printer for an approximate number of page-sheets.

Give it like this to the printer:

Volume: 128 pages excluding jacket (please quote 4 pages more or less)

2. Number of copies

Obviously your printer will need to know how many copies you want for example, 1,000 copies or 3,000 copies. You should know for whom a publication is intended, that is the size of the target group. Laymen often tend to overestimate the number of buyers. In order to be able to sell books you should have studied the likely market.

Not many people outside the print world realise that three quarters of the cost of almost any printed matter – whether it be a full-size book or just a business card – is setting up the type and getting things ready for

the press. Thus, the difference in cost between, say, 1,000 copies and 2,000 copies is small against the final bill.

The lower cost per copy should not, however, tempt you to print such a lot of copies that afterwards a considerable part of these have to be sold off to the used-paper dealer or worse still, just thrown away. This happens all too often.

The best way is always to get as many copies printed as can be distributed properly in the next three months. The printer should, however, be instructed to store the printing plates so if later there is a further demand for the publication, it can be reprinted at a relatively low price. Obviously this does not apply to publications with contents of a very topical nature.

3. Format

The format of a book, that is its width and length, can be very important in respect of its cost. You should inquire about the size of the paper available.

When deciding the size of the book, you should ensure that the minimum of wastage is incurred when the sheets are cut. Books in A 5 format, such as this one, are handy, attractive and they stand in a favourable relationship to the size of sheets of most printing paper.

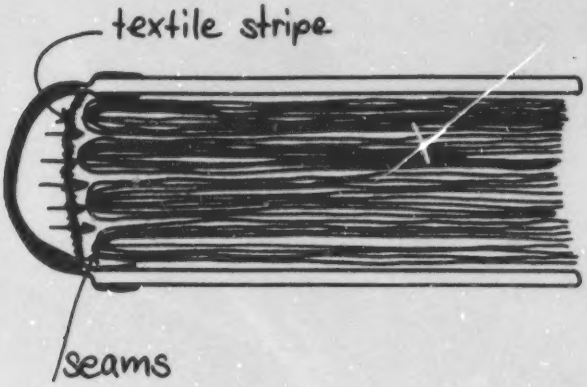
4. Processing

This is really a matter of just how you want the finished book to look. Essentially, three different forms come into question:

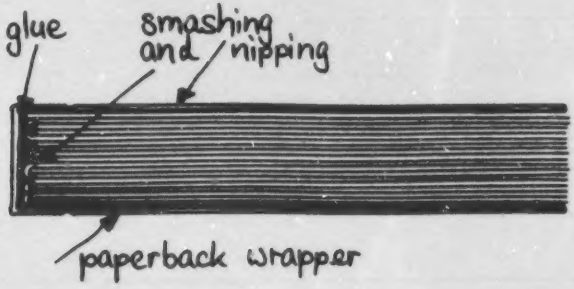
Hard-cover binding
Paperback with threadless binding
Spinal stapling

Since the hard-cover binding is expensive, it is done only in case of major books. The binding principle, simply stated, is: the printed sheets

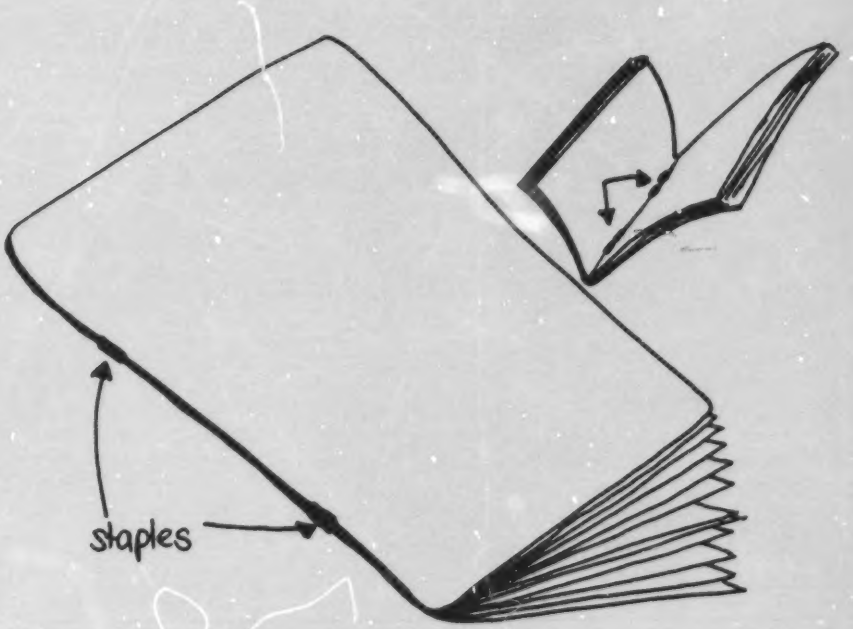
are folded into sections to conform to the size of the book, they are trimmed, sewed at the spine with a cotton or silk thread, stacked, fastened by gluing before a textile stripe is gummed on and finally affixed into the thick cover which has been seperately printed and prepared.



Threadless binding, which is the rule with paperback editions and which has been done for this book as well, has been fully automated in modern book-binderies. It is reasonable priced. The printed sheets are folded, stacked and then roughened up at the spinal brim so that glue soaks in properly thus joining the pages better. Then the pages are fixed into the wrapper and finally the book is trimmed by the guillotine. The book in your hands has been processed this way.



In case of thinner booklets or pamphlets with up to 100 to 120 pages, you can settle for spinal stapling which is cheaper than even threadless binding. The procedure is very simple: each four pages constitute a sheet. These sheets are piled upon each other, twice stapled in the middle and then folded and trimmed. The disadvantage, however, is that no spinal text can be printed on; thus the book cannot be easily spotted on the shelf.



So, to summarise almost all the small or medium size booklets you may be planning, while making inquiries at a printers ask about either

Processing: threadless binding

and

Processing: two staples at the spine

5. Print colours

For price quotations it is important to know the number of colours to be used since in case of simple printing machines every colour requires a repeat print. That is, for a four-colour print, the paper has to go through the machine four times. Larger and modern printing presses have four-colour machines but they are costly to use and the work they produce is correspondingly expensive. For jobs which require printing of up to about 3,000 copies they are used only in exceptional cases.

The contents of booklets – that is, the written matter – usually got printed in black, but the cover may be printed in one or two additional colours. In order to keep the number of colours small, you may resort to a trick: use negative graphics or drawings. By doing so, the white of the paper turns to an additional colour.

For this booklet, only two colours have been used on the cover: blue and black.

Instructions to a printer would, therefore, say:

Printing: cover two-coloured (blue and black), contents black.

When you are discussing colours with a printer get him to show you his colour cards. He will have scores of these, covering virtually every conceivable hue of every primary colour and you will thus be able to select the colour you want.

6. Paper

If you are able to make a selection from various kinds of paper, it is advisable to select a white paper without wood cellulose weighing 80 to 90 g/sq m. This corresponds to normal writing paper. For this book a 90 g heavy paper without wood-pulp has been used.

The reason why a paper with as little cellulose as possible should be used for books is that such paper has longer durability, especially in hot

and humid countries. Wood containing paper, that is newsprint, quickly turns yellow and absorbes humidity making it easily torn.

This is particularly true for book covers. However, jacket paper or better jacket cardboard has to be sturdier, that is heavier. For books upto 300 pages a wrapping cardboard of about 280 g/sq m is needed. For thick paperbacks one should take a slightly heavier cardboard – 350 to 400 g.

The jacket cardboard of this book is 280 g/sq m and contains synthetic cellulose.

Certainly a large number of different kinds of paper are available, from inexpensive newsprint to highly expensive high-gloss fine art printing paper. In fact various kinds of paper are available for different techniques of printing. Significant for the layman, however, should be whether the paper is wood-containing, whether it is without wood, whether it is mat or glossy or whether – in case of jacket paper – it has any embossing. Jacket cardboard for most books are, for instance, mat with linen finish or simply glossy.

Thus we may tell the printer:

Paper: contents paper white mat 90 g/sq m,
jacket cardboard white linen finish 280 g/sq m;
both free from wood-pulp.

7. Type matter and printed area

In this section we really need a professional printers' knowledge. But we do not want to make it too complicated. So let us confine ourselves to examples which are in common use in the printing of books.

"Type matter" refers to the type shape and type size. There are hundreds of different type shapes. The layman should distinguish only between a grotesque type (sans serif) and an antique type (serif). The

type used in this book is known as "Times". The grotesque type in which the setting of this sentence has been set is called "Helvetica". It is quite often used.

Every type shape is also available in *italics* and **semi-bold**.

If you want to make a publication particularly attractice, vivid and lively you can distinguish different parts of the text by making use of different type shapes, for instance,

headings in a grotesque type,

the mormal text in an antique type,

verbatim quotations in italics

and emphasis such as catchwords or maxims in semi-bold.

But it is important – indeed, vital – that you should decide on exactly the type styles and sizes you want before you give the job to the printer. It will be an expensive business if you decide to start changing them when you get proofs back.

You should have some idea about type sizes so that you can deal more easily with the printer. The printing industry has its own measuring unit, namely point and cicero (1 point = 0.376 mm; 1 cicero = 12 point = 4.513 mm).

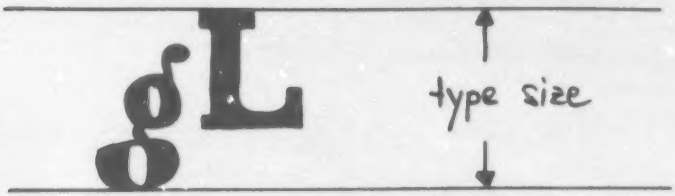
Though there is an increasing tendency worldwide to take to the metric system even in printing, the type sizes are still specified in points. The trained eye of an editor and that of a typographer recognises at once whether the type used is 10 point or 14 point. Following are examples of Times and Helvetica types:

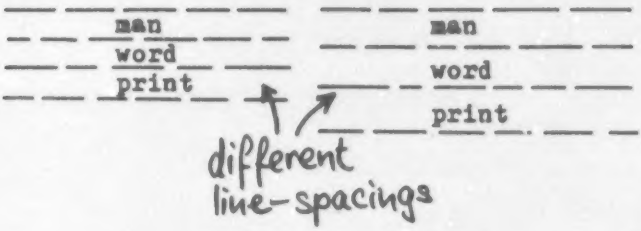
Printed Words — Times 8 p.
Printed Words — Times 9 p.
Printed Words — Times 10 p.
Printed Words — Times 12 p.
Printed Words — Times 14 p.
Printed Words — Times 16 p.
Printed Words — Times 20 p.
Printed Words — Times 24 p.
Printed Words — Times 28 p.
Printed Words — Times 36 p.

Printed Words — Helvetica 8 p.
Printed Words — Helvetica 9 p.
Printed Words — Helvetica 10 p.
Printed Words — Helvetica 12 p.
Printed Words — Helvetica 14 p.
Printed Words — Helvetica 16 p.
Printed Words — Helvetica 20 p.
Printed Words — Helvetica 24 p.
Printed Words — Helvetica 28 p.
Printed Words — Helvetica 36 p.

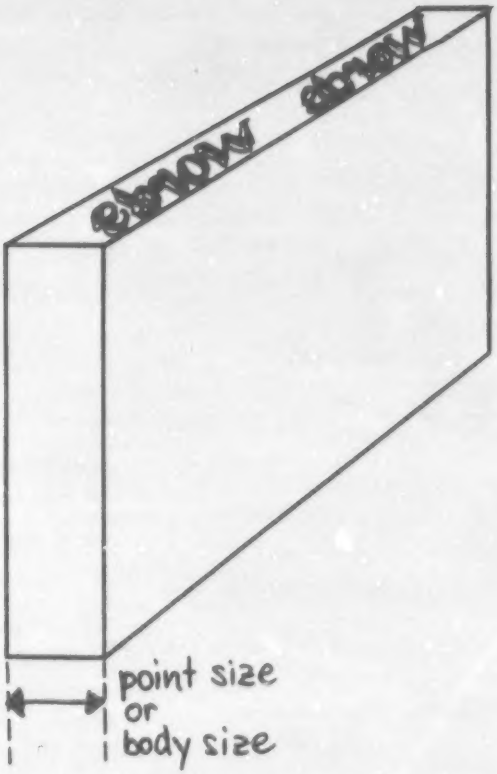
70

Along with the type size, line-spacing should also be specified. The following drawings show what it implies:





Thus the line-spacing indicates how far-removed the lines have to be from each other. If you have the opportunity to watch a compositor who still uses lead type take a composed line in your hand and see the relationship between the type size and the line-spacing:



When you are getting the text ready for a printer or even at the stage of seeking quotations, you should specify not only the type size but also the body size. In the case of this book, for example, the size of the normal lettering type is 10 point but the line-spacing is 11 point. This is how the printer would be instructed:

10/11 p. Times

The phrase "printed area" or "printed page area" implies the height and width of type matter on a page, usually specified in millimeters. The printed page area in this book amounts to 110 mm by 160 mm.

Under point 7, you might thus tell the printer:

Type matter and type area: normal matter 10/11 p. Times,
ca. 10 % Helvetica,
with semi-bold and italics;
headings 12 p., 16 p., 20 p.,
and 24 p. Times and Helvetica;
printed area 160 mm height and
110 mm width.

8. Illustrations

There are essentially two kinds of illustrations: drawings which are black and white and pictures such as photographs with different shades of grey between white and black.

In case of drawings, reproduction is very simple: the copy is merely photographed and enlarged or reduced to the desired format. In case of photographs or sketches with different shades of light, they have to be "screened", that is made into a metal block with hundreds of dots on the surface of various density which will catch the ink from the press and reproduce all the shades of the photograph, from jet black through the range of lighter blacks and greys to almost white. Printing processes which do not use metal type – like offset – use a similar technique to copy the shades in the picture.

It is important to tell the printer how many illustrations are drawings and how many to be screened. For example:

Illustrations: 6 photographs, 2 full-page and 4 half-page;
17 drawings, 14 half-page and 3 full-page;
all to be reduced from about A 4 format.

The sizes you want should be marked on the back of your pictures when given to the printer.

I you want colour pictures in your book then it is far cheaper to have them all together in one section by themselves, rather than spreading them throughout the text.

9. Packaging and delivery

The printer should be told how the delivery of books is required, that is in packets of ten each or each book packed in paper or in a welded synthetic folio. If the books have to cover long distances in a humid climate, it is advisable to pack them in air-tight welded synthetic folios. This method of packaging is often used in industrialized countries.

The printers' quotation should include delivery free of charge so that no unexpected transport expenses are incurred.

Put it like this in your letter to the printer:

Packaging and delivery: in packets of 10 each,
delivery to door free of charge.

Thus, if you follow the preceding pattern, your letter to the printer will look like this:

14 May 1984

Dear Sirs,

please quote to us at the earliest the charges for having a booklet printed in English provisionally entitled "How to print". The particulars are as follows:

Volume: 128 pages excluding jacket (please quote 4 pages more or less)

Number of copies: 1,000

Format: A 5

Processing: threadless binding

Printing: jacket in two colours, black and blue; contents black

Paper: contents paper white mat 90 g/sq m, jacket cardboard white linen finish 280 g/sq m; both free from wood-pulp.

Type matter and printed area: normal matter 10/11 p. Times, ca. 10 % Helvetica with semi-bold and italics; headings 12 p., 16 p., 20 p., and 24 p. Times and Helvetica; printed area 160 mm height and 110 mm width.

Illustrations: 6 photographs, 2 full-page and 4 half-page, 17 drawings, 14 half-page and 3 full-page; to be reduced from about A 4 format.

Packaging and delivery: in packets of 10 each, delivery to door free of charge.

The manuscript and illustrations will be forwarded with the print order. The books must be delivered by 1 September this year. If your quotation does not reach us before the 20th of this month, I am afraid we would not be able to consider it.

Yours truly

Editor.

The production of books or other printed documents is much cheaper if you do not leave the preparation of the type to the printer but provide him with a copy which is capable of reproduction. It can be a fair typescript or one produced on a composer – if that is available. Assuming that a printer uses the offset process, such a copy needs only be photographed and reduced to the print-format.

Obviously books which are set in conventional type are more impressive but where financial resources play a decisive role the reproduction is a very good second best.

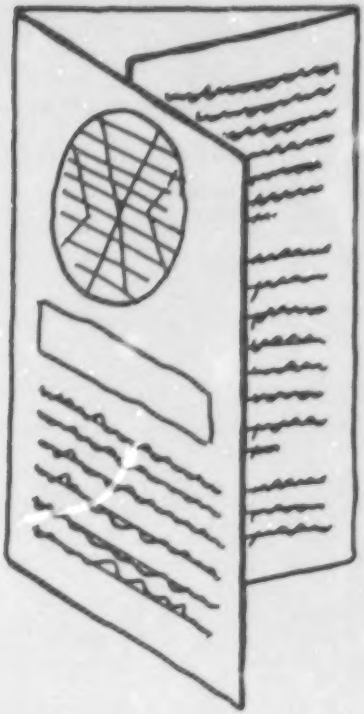
For institutions intending to publish periodicals – for instance, a little newspaper or a magazine – it would be worthwhile going in for a composing machine. It will pay for itself within a period of three years in case of a quarterly with about 80 pages. If you do decide to produce the type matter yourself under the point type matter tell the printing-works:

Text capable of reproduction will be provided in format A 4.

The preceding example for book production largely applies to all other publications. The following examples would demonstrate which differences or additional particulars need be taken into account:

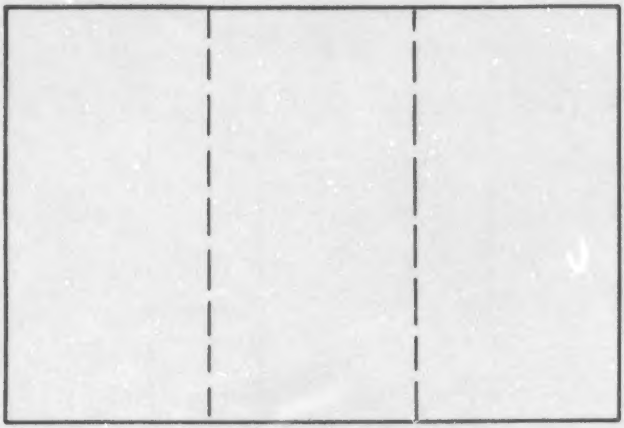
B. An information sheet or folder

We want to get printed an information sheet about our institution or a project which looks like the following:



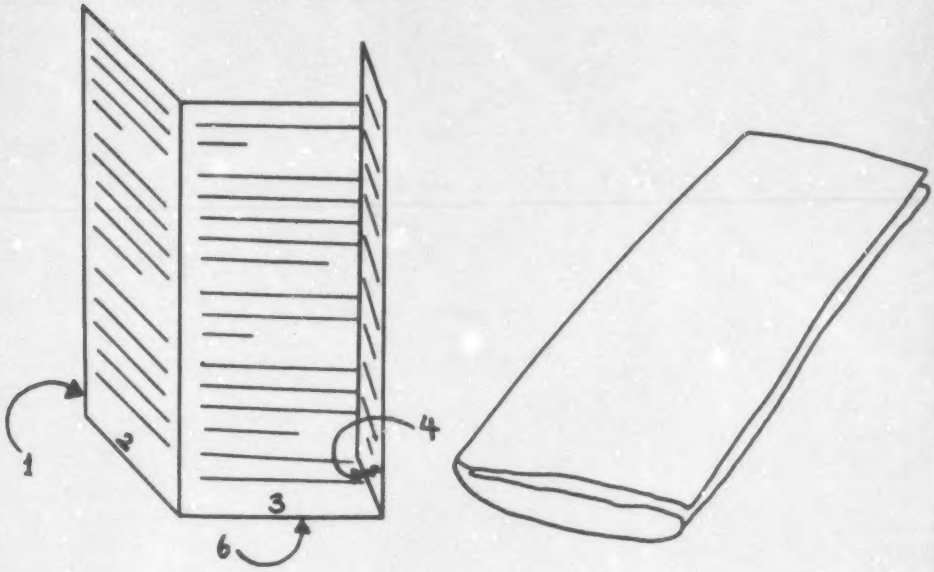
The basis for this folder is provided by a sheet in A 4 format which is folded twice.

77



Format A 4

This information sheet would thus have six "pages".



78

On each if these pages is printed a one-column text with a line-width of 80 mm and a height of 190 mm.

In the letter to the printer the following particulars should be mentioned:

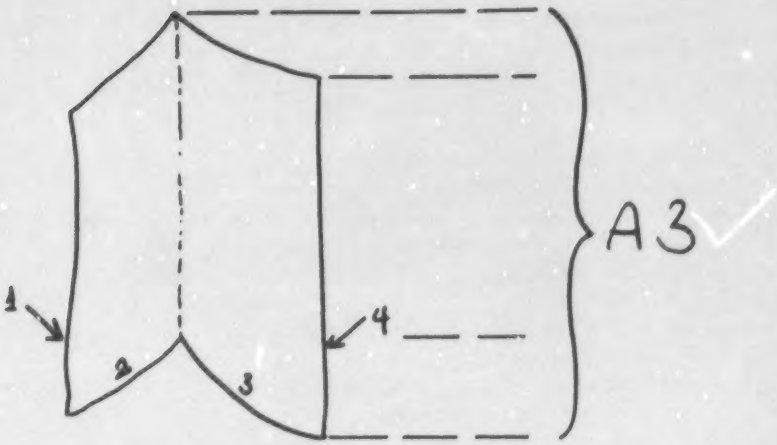
Volume/format: A 4 sheet folded twice
Number of copies: 2,000
Printing: two-coloured, black and green
Paper: ca. 150 to 180 g/sq m mat
Type matter and printed area: 9/10 Helvetica 80 mm width and 190 mm height with 16 p. captions
Illustrations: an emblem (drawing) to be reduced by about 100 % from the original
Packaging and delivery: in packets of 100 each to be delievered to door free of charge

In order to illustrate how you expect such a folder to look it would be worthwhile enclosing a folded sheet in your letter to the printer.

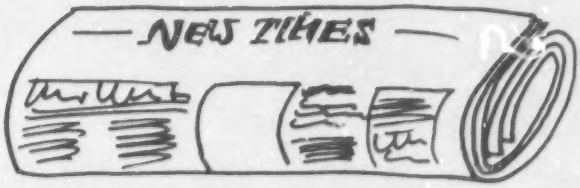
C. A little newspaper

At least some experience in the printing industry or in graphics is required in order to plan a newspaper on one's own. A very simple example would demonstrate what one needs to know and how to proceed with it.

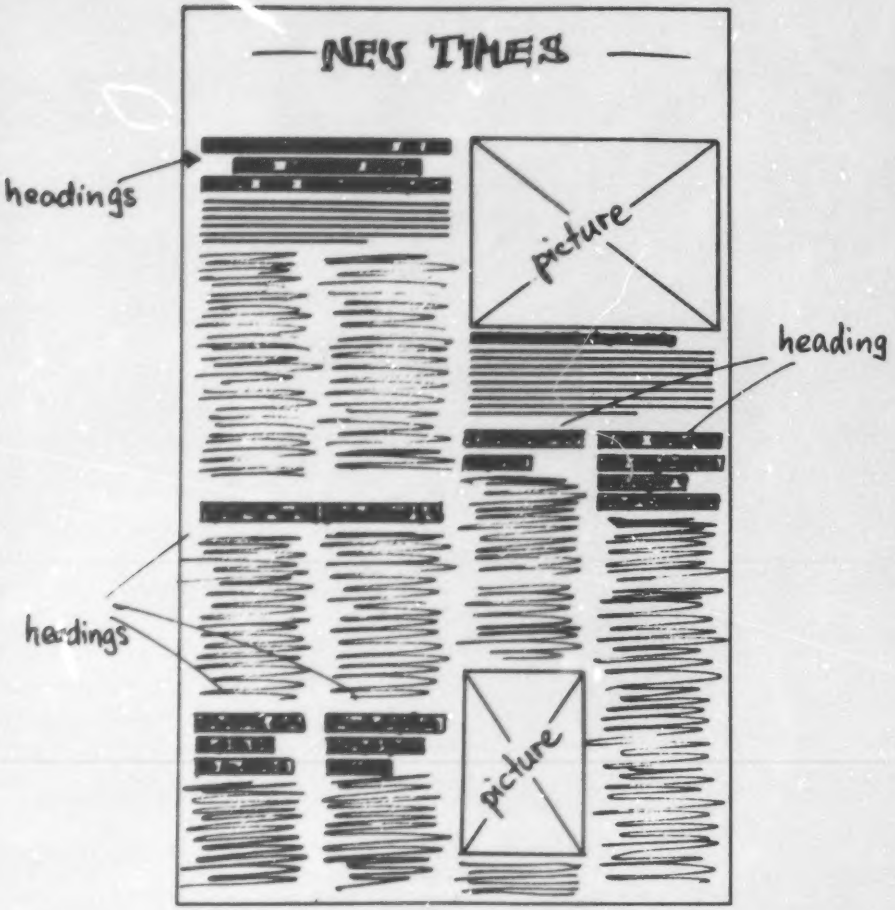
Let us say our little newspaper would have four pages of A 3 format:



The printing press would be in a position to print this newspaper on sheets of A 2 format. Once folded in the middle, they would yield four pages in A 3 format. For despatch they could be rolled together or folded.



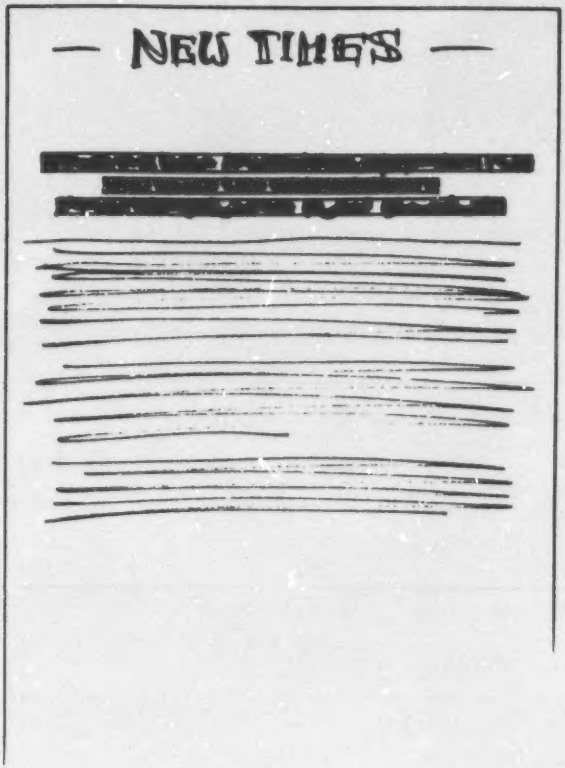
In contrast to books, the production of a newspaper involves designing each page seperately. Should you decide on a fou column page for the newspaper, this is how one page might look:



In such a format the colomn width would be almost 60 mm.

81

It would make tedious reading and remove the possibility of having pictures beside the text if, as in case of a book, there was just one column per page:



For such a newspaper the following particulars should be given to the printer:

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Volume: 4 pages
Number of copies: 5,000, weekly
Format: A 3
Processing: folding
Printing: black, once a month additional red on the cover page
Paper: newsprint 80 g/sq m
Type matter and printed area: 8/9 Times; captions 12 p. to 36 p., bold grotesque; columns width 60 mm, 4 columns per page.
Illustrations: ca. 6 photographs per issue, average format 125 mm × 80 mm, to be reduced or enlarged.
Packaging and delivery: Packets of 100 each delivered free of charge.

When planning such a publication it is essential to have a detailed talk with the printer, covering every aspect from the quality of the paper to be used, the actual method of printing and the type styles und sizes to be used. It will save you a lot of time – and probably a lot of money, too – if you can arrange for the printer to despatch the publication straight from the works, though the printer will charge you for this service.

D. A bulletin or an information magazine

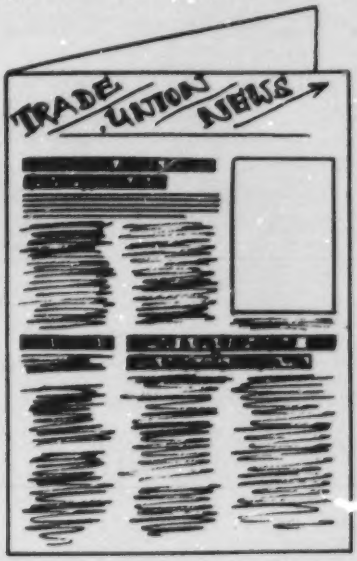
A magazine can be designed – as everyone knows from glancing at a newspaper kiosk – in hundreds of ways. For a varied layout, however, one certainly needs graphic artists who plan every issue page by page. But this is an expensive service and only worthwhile if you intend printing a very large number of copies with a lot of illustrations and using coloured illustrations.

A small educational institute, a trade union, a political party's local branch or an information centre which requires at the most only 10,000

to 20,000 printed copies would be well-advised to avoid such expenditure, for, with a little imagination, it is possible to produce effective and attractive publications.

The simplest form of a trade union publication, for example, would be a four-page bulletin in, say, A 4 format.

Three columns per page would suffice for a lively and impressive layout. The processing of such a publication is simple. The printer prints on an A 3 sheet and folds it once.



The particulars a printer would need might read as follows:

Volume: 4 pages
Number of copies: 12,000 monthly
Format: A 4
Processing: fold once
*Printing: two-coloured**
Paper: the most reasonable priced paper ca. 80 g/sq m
Type matter and printing area: 9/10 Times, 60 mm column width with 14 p., 20 p. and 28 p. captions
Illustrations: per issue ca. 3 photographs, maximum size 125 mm × 100 mm
Packaging and delivery: in packets of 100 each, delivery to door free.

* A second colour, for instance blue or red, can add greatly to the appeal of a bulletin. Separate lines, captions or even entire parts of the text can be printed in the second colour. Texts which should catch the eye may be "lined with" colour, that is the backdrop appears in colour. Such backdrops are mostly screened so that the colour becomes fainter and the text is not "struck dead", that is the colour is so heavy that the text is difficult to read.

Following the same principle, it would be possible to produce an impressive magazine and perhaps print a multicolour cover. The instructions for such a magazine be:

Volume: four-page cover
36 pages contents
Number of copies: 12,000, quarterly
Format: A 4
Processing: Spinal stapling, twice
Paper: wrapper gloss paper ca. 120 g/sq m, contents mat ca. 90 g/sq m
Printing: cover four-coloured, contents one colour
Type matter and printed area: 9/10 Times, 60 mm column width with 12 p., 16 p. and 20 p. headings
Illustrations: per issue ca. 10 photographs, 5 drawings and graphics; for cover page 1 coloured photograph in format 210 mm width and 200 mm height.
Packaging and delivery: in packets of 100 each to be delivered to door free.

Preparing the manuscript

Precision and clarity in the planning and calculation of charges should be followed when handing over manuscripts and illustrations to the printer and particularly in corrections. This saves money and time.

Bofore a manuscript is forwarded to the printer, it should be "marked out" page by page, that is the necessary particulars for the compositor should be given. Thus one would, for example, write at the top of the page:

Times 9/10 p. on 60 mm.

This means that the type to be used is "Times", the size of the type 9 point, the line-space 10 point and the width of the type matter or column 60 mm.

These particulars do not have to be given on every page of a manuscript in which the entire text is to be printed in the same type and same printed area.

If you want to have parts of the text in semi-bold, bold, italics or spaced out, the relevant passages are underlined and the type to be used for these parts of the text shown in the margin. If full paragraphs are to be printed in another type, it is sufficient to note in the margin with vertical strokes and specify the type to be used.

If drawings and pictures are to be inserted in the text, these should not to be stuck to the text page. Drawings and pictures should be carefully numbered and handed over separately to the printer. The manuscript should show their positions, for instance "picture no. 4". The typographer would also make a brief note there so that later in the composed text the positions can be easily spotted again.

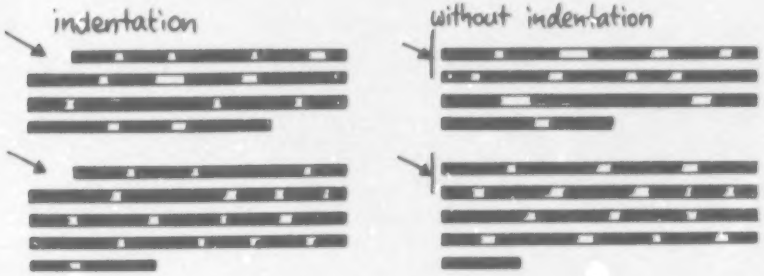
In case of manuscripts for periodicals carrying various articles, it should be shown on every page what article it is, for which issue it is intended, which types are to be used, what width the column would have, etc. etc.

Let us take an example: there is a five-page article dealing with "collective bargaining"; it is intended to be printed in the second issue of 1984 of the periodical "Trade Union Report" (TUR) and the text is to be typeset in 9/10 Times on 60 mm width. Thus every page of the five-page manuscript would carry

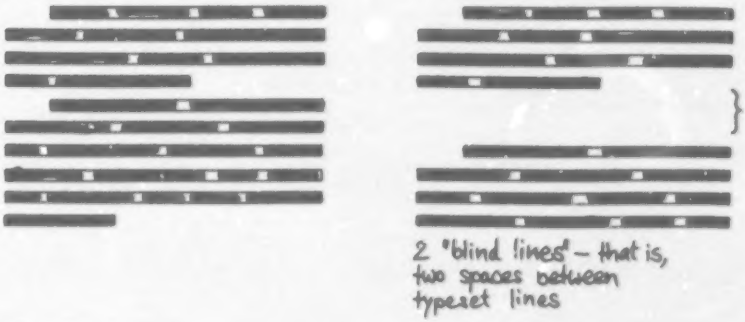
TUR 2/84. Collective ..., 9/10 Times 60 mm

and naturally the page number.

The printer should be shown by the manuscript whether type matter is to be indended at the beginning of a paragraph or whether no indentation is required.



It should also be made clear on the typescript whether one or two "blind lines" – that is spaces – are required between two paragraphs.



Equally helpful for the compositor is if all the headings are put together on a separate sheet. Because headline type sizes vary greatly from those used for the normal text, the headings are typeset on other machines or by hand. The compositor should be spared the job of searching for corrections in a manuscript with perhaps 300 pages. Give them to him on two pages! This will help him do the job quickly and economically – and thus save money.

Proof reading

When the printer sends you the proofs for correction, there begins a new aspect of printing: proof reading which the layman has to learn. There are more than 20 signs used for correction worldwide by authors and sub-editors, but above all by professional proof-readers. The following simplified system of proof-reading is sufficient for the layman:

Every proof-reader's sign marked on a printer's proof should be repeated in the margin; the necessary alteration should be ~~marked~~ on right-hand side beside the repeated proof-reader's sign.

⊢ written out

Superfluous letters or words are deleted and ~~and~~ shown in the margin with the deletion-sign (a small Greek delta).

⊢ δ

Wrong spellings are struck off and substituted by the right ones in the margin. If there is more than one mistake in a line, different signs are given.

/ i
Lg Le Lg

Wrongly set words are completely erased ~~and~~ put down correctly in the margin. In case of partially wrong words only the letters need be deleted and replaced by correct ones. This applies in particular to wrong divisions in words at the end of a line and at its beginning.

⊢ and

H et

/ iv
L δ

In case of missing letters, erase either the preceding or the follow-

/ ec / lo

ing letter and repeat it in the margin by adding the missing one.

/ dd

If complete words are missing, denote by a stroke the gap where to be placed, and make the corresponding correction in the margin.

/ they are

Misplaced letters or words are the rearrangement sign indicating how they have to be placed in a word or a sentence. If the sentence is too much of a mess, the entire passage is struck out and ~~repeatDEer COlyeer~~ in the margin.

⊢ repeated correctly

Words to be composed in another type are underlined and the desired type form is marked.

semi-bold

To mark out a missing or too narrow space between two words this sign is used. Too wide spaces are marked with ; if the space between the words is to be deleted this sign is used.

Should a text form a new paragraph, the following sign is used: ⌐. In case a paragraph is to be run on the sign used is ⌐.

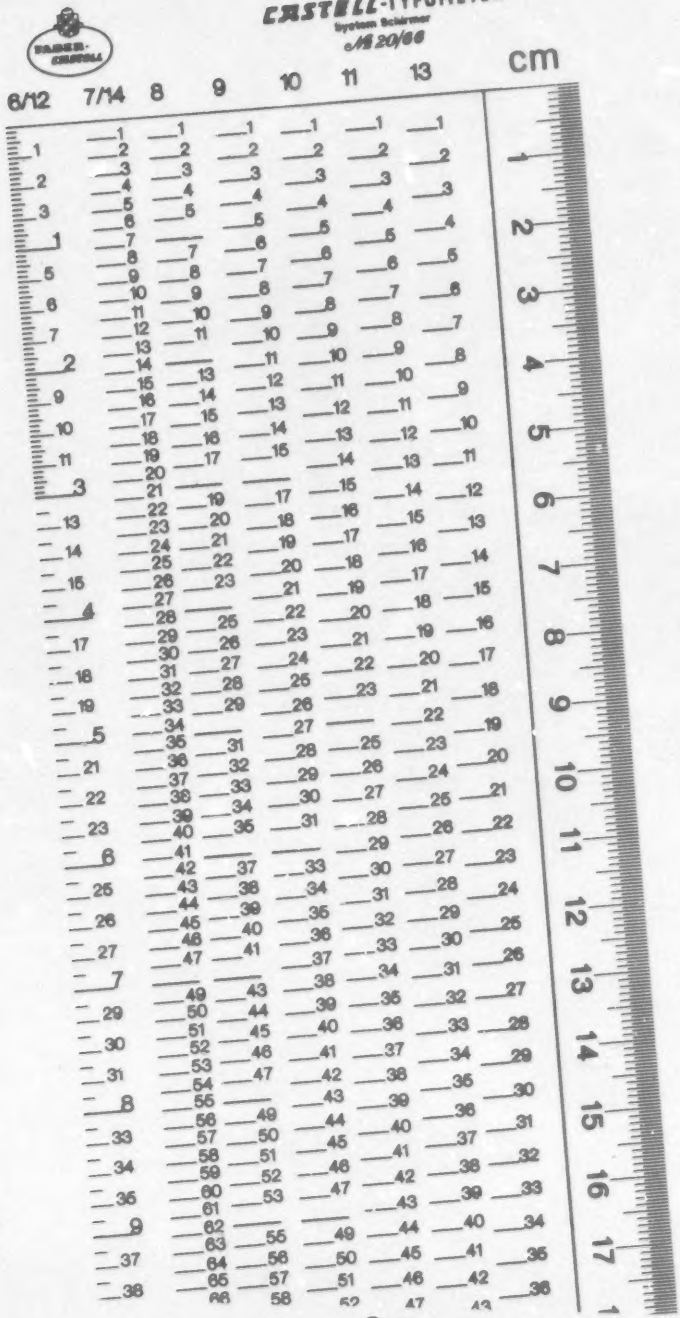
In case the beginning of a line or its end does not have the right graphical form, this sign would indicate that.

If a correction has been ~~wrongly~~ done, it can be revoked by deleting the correction in the margin placing dots below the wrongly corrected word.

wrongly

Corrections should be done very clearly, preferably printed in children's-style writing.

Once the compositor has carried out the corrections, he would again send on the galleys – the proof-sheets of the corrected type matter – for re-reading.


CASTELL-TYPOMETER
System Schirmer
6/12
7/14
8
9
10
11
13
cm

Paging

And now it is time for paging, that is for making up into pages the running type matter. In case of books, this is relatively easy. One may in fact leave it to the compositor if one has provided the exact positions for illustrations and told the printer how a new chapter should begin – each on a new page on the right-hand or left-hand side or everytime on the right-hand side. Note: in case of publications, the right-hand side pages always have odd numbers (1, 3, 5, 7 etc.) and left-hand side pages even numbers (2, 4, 6, 8 etc.).

If one intends to rearrange some particular pages into more than one column – which certainly applies to newspapers and periodicals – quite a bit of skill and experience are required. Both can be acquired by every layman, if he is not too clumsy to be able to go about with scissors, typometer – a ruler deployed by typographers (see picture) – and with gum and has knowledge of the simplest methods of calculating. A little feeling for graphic modelling is also necessary.

In case a newspaper is to be produced, it is worthwhile to be clear about how the pages are intended to look like – even at the manuscript stage. For this, a printers should be requested to prepare a newspaper sheet which corresponds to the original size of the planned newspaper and where the columns are marked by thin fine lines. In case of a newspaper with four columns, the sheet would look like this:

It is also advisable to determine the average number of strokes per line with the type matter width, so you can adjust your typometer accordingly and "write on line". That way a newspaper-page can be planned in advance – certainly not exactly to the millimeter but in such a manner that the planned shape emerges and you do not write text which is shorter or longer than required.

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Furthermore it is necessary to know how the height and width of a photograph is ascertained. Original photographs are generally larger than the size in which they will appear in a publication. Thus, they have to be reduced. This is done by a special camera which also screens the pictures.

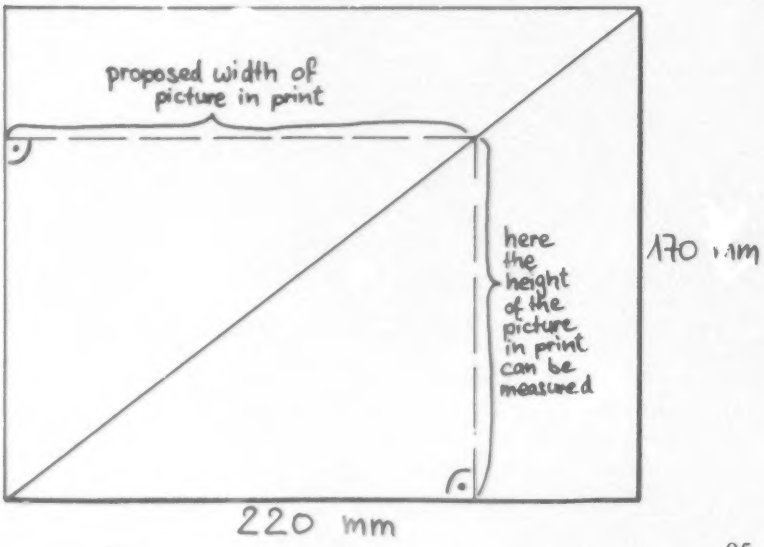
In case you have a photograph with, for example, a format of 220 mm width and 170 mm height and you wish to print it over a two-column width, you have to calculate as follows:

$$\frac{220\text{ mm}}{125\text{ mm}} = \frac{170\text{ mm}}{x\text{ mm}}$$

x is then the height which the picture would be in print. 125 mm is the width of two columns including the column space of 5 mm.

The computation is done as shown on page 63

The height of a picture can be determined more easily if you draw a diagonal line on the reverse and take the measurement on it with a centimeter scale or a typometer.



If a photograph is smaller than the intended format it will appear when printed, it is placed on a larger sheet of paper, the diagonal is elongated on the paper and the measurement is taken accordning to the procedure mentioned earlier.

Bearing these guidelines in mind we can now plan a newspaper page. Let us start again with four columns. We are planning for instance, for a page with a relatively long article with a picture, a shorter article without an accompanying picture, a smaller article with a portrait photograph as well as some brief news stories. In such a case, this page might look like shown opposite.

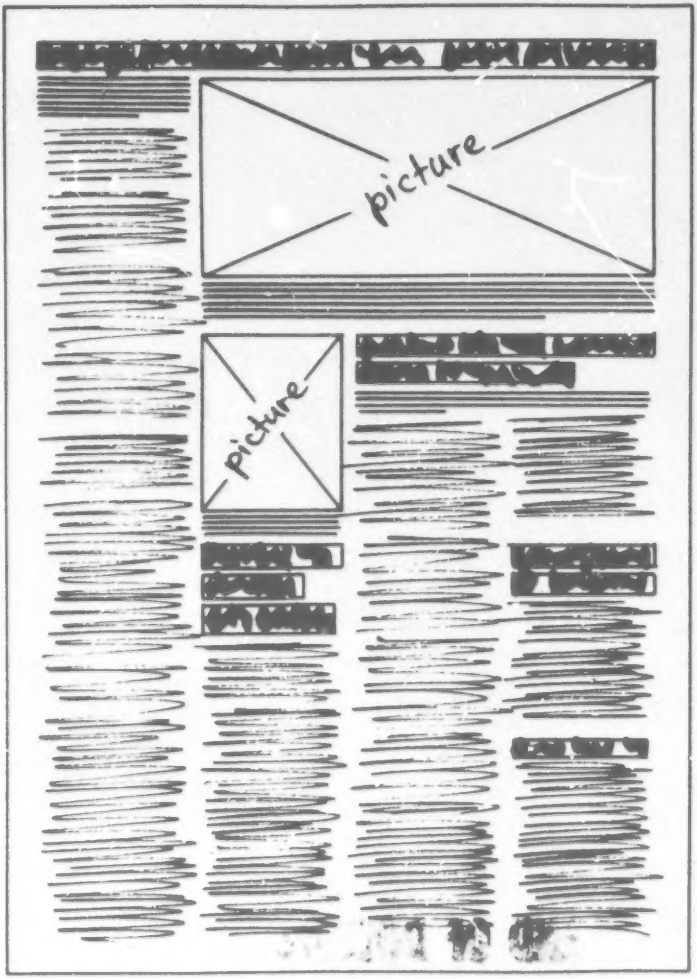
Now you have drafted a very simple and clearly arranged design of one page. This would enable you to estimate the number of lines different articles might have and then abridge the manuscript accordingly.

When the proof-sheets of the corrected text are received from the printing-works, these can be cut to the required size and pasted on to the sheet in the format of the original newspaper page. On the basis of this draft, the compositor or layout-man would complete the page.

Once he has done that, we get for the last time a proof for final correction, that is for giving a "go-ahead for printing". In case some minor errors have been discovered, you would denote on the page: *"Print after correction"*.

If you intend producing a magazine, it is not generally desirable to plan the specific pages in advance and write out the manuscripts as required. If no extravagant layout is desired, it would be sufficient to do the planning at the time of sticking the proof-sheets on the pages. The spacing of headings should, however, be considered in advance so that the printer can set the captions alongwith the text. This, in turn, would enable you to make your "gummed-on-page proof" in a manner the finished page is expected to look like.

Designing any sort of publication – from a leaflet to a newspaper – can be very satisfying and with experience even amateurs can achieve excellent results. If you have to employ a graphics artist he will cost quite a lot of money.


picture
picture

The more you get to know different type forms and their sizes and the wide range of possibilities offered by printers, the livelier and smarter you will be able to design a publication. It is important, however, that the reader should not be confused by too many "tricks". Once the design of a newspaper or a periodical has been finalised, its appearance should not be changed too often and never radically. Every periodical should have, optically, a character.

"END OF DOCUMENT"